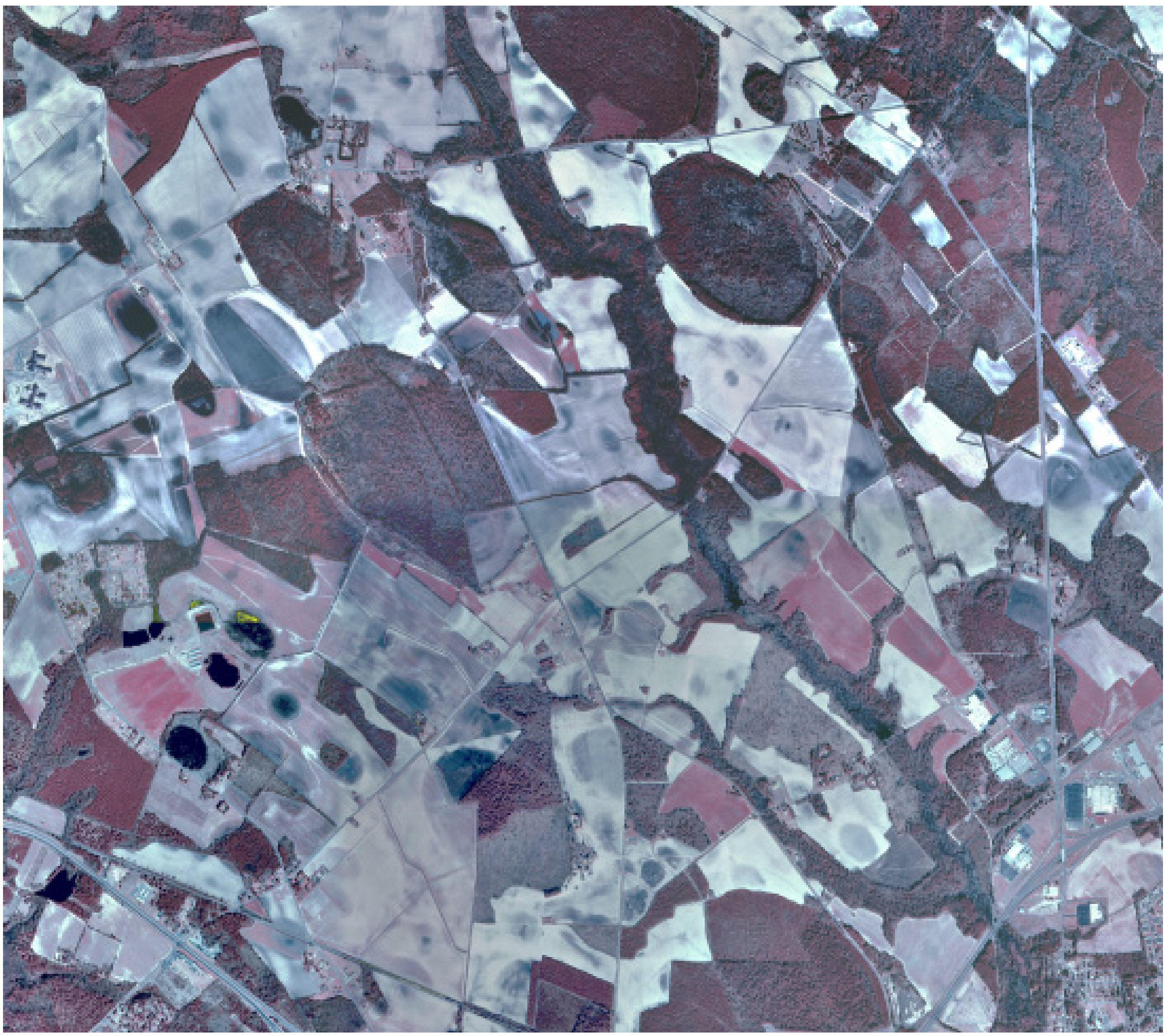
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

In cooperation with North Carolina Department of Environment and Natural Resources, North Carolina Agricultural Research Service, North Carolina Agricultural Experiment Station, North Carolina Cooperative Extension Service, Scotland Soil and Water Conservation District, Scotland County Board of Commissioners

Soil Survey of Scotland County, North Carolina



How To Use This Soil Survey

General Soil Map

The general soil map, which is a color map, shows the survey area divided into groups of associated soils called general soil map units. This map is useful in planning the use and management of large areas.

To find information about your area of interest, locate that area on the map, identify the name of the map unit in the area on the color-coded map legend, then refer to the section **General Soil Map Units** for a general description of the soils in your area.

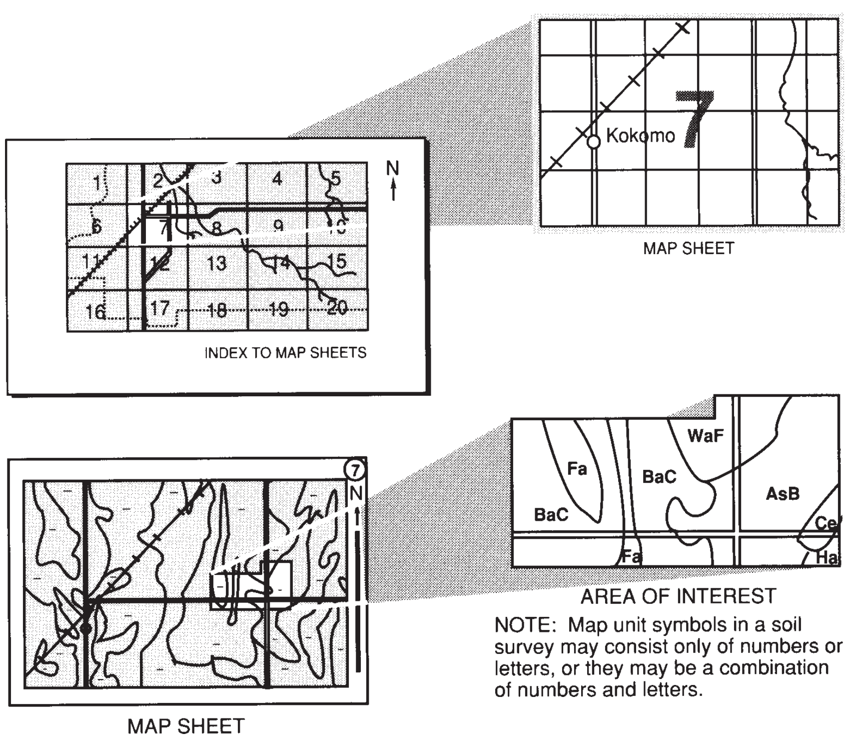
Detailed Soil Maps

The detailed soil maps can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and turn to that sheet.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Turn to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.



National Cooperative Soil Survey

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies, and local agencies. The Natural Resources Conservation Service has leadership for the Federal part of the National Cooperative Soil Survey. This survey was made cooperatively by the Natural Resources Conservation Service and the North Carolina Department of Environment and Natural Resources, the North Carolina Agricultural Research Service, North Carolina Agricultural Experiment Station, North Carolina Cooperative Extension Service, the Scotland Soil and Water Conservation District, and the Scotland County Board of Commissioners. The survey is part of the technical assistance furnished to the Scotland Soil and Water Conservation District.

Major fieldwork for the maintenance of this soil survey was completed in 2004. Soil names and descriptions were approved by amendment to the correlation in 2006. The maintenance for this survey included adjusting soil lines and re-correlating the legend based on field work conducted. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2006. The most current official data are available at http://websoilsurvey.nrcs.usda.gov/app/.

Soil maps in this survey may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

This soil survey updates the survey of Scotland County published in 1967.

Nondiscrimination Statement

Cover: A color infrared aerial photograph showing the pattern of land use and soils in Scotland County. The light areas are farmland, dominated by the Norfolk and Noboco soils. The dark, oval-shaped areas are Carolina Bays, comprised of Coxville and McColl soils. The larger bays generally are forested, while most of the smaller bays have been drained and are in cropland.

Additional information about the Nation's natural resources is available online from the Natural Resources Conservation Service at http://www.nrcs.usda.gov.

Contents

Issued 2006

Foreword

Soil surveys contain information that affects land use planning in survey areas. They include predictions of soil behavior for selected land uses. The surveys highlight soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

Soil surveys are designed for many different users. Farmers, ranchers, foresters, and agronomists can use the surveys to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the surveys to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the surveys to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. The location of each soil is shown on the detailed soil maps. Each soil in the survey area is described, and information on specific uses is given. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Mary K. Combs
State Conservationist
Natural Resources Conservation Service

Soil Survey of
Scotland County, North Carolina

By North Carolina Soil Survey Staff, Natural Resources Conservation Service

Soils surveyed by Robert E. Horton, John W. Turpin, Julian H. McIntyre, Ronald B. Stephens, Roy A. Goodwin, Jr., and Dean W. DaMoude, Soil Conservation Service

Soil survey updated by Steven T. Evans and Willie E. Spruill, Natural Resources Conservation Service

United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with
North Carolina Department of Environment and Natural Resources, North Carolina Agricultural Research Service, North Carolina Agricultural Experiment Station, North Carolina Cooperative Extension Service, Scotland Soil and Water Conservation District, and Scotland County Board of Commissioners

Scotland County is in the south-central part of North Carolina (fig. 1). It lies on the physiographic boundary between the Coastal Plain and the Piedmont. It has a total area of 205,331 acres. In 2000, the county had a population of 35,998 (U.S. Census Bureau, 2003). Laurinburg, the county seat, had a population of 15,874. The county is predominantly rural.

This soil survey updates the survey of Scotland County published in 1967 (Horton, 1967).

General Nature of the Survey Area

This section provides general information about Scotland County. It describes the history and development; physiography, relief, and drainage; water supply; and climate.

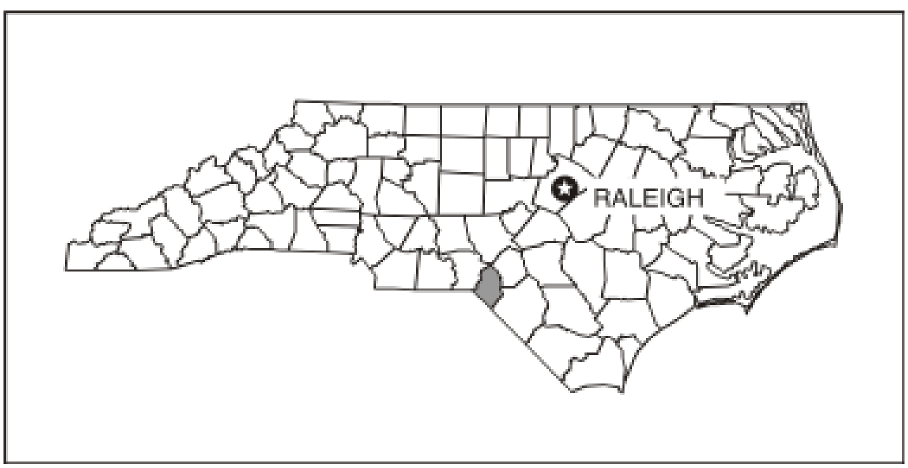


Figure 1.—Location of Scotland County in North Carolina.

History and Development

Scotland County was established in 1899 and was originally part of Richmond County. It was named for the earliest settlers who were largely Highland Scots.

Agriculture has always been an important part of the economy of Scotland County. The agriculture of today includes livestock, row crops, and agri-tourism. In addition to agriculture, advanced manufacturing, from automotives to plastics and biotech and pharmaceutical industries, has contributed greatly to the economic growth of the county (Laurinburg / Scotland County Chamber of Commerce, 2006).

Physiography, Relief, and Drainage

Scotland County makes up part of two Major Land Resource Areas: the Carolina and Georgia Sand Hills and the Southern Coastal Plain. The northern one-third of the county is in the Carolina and Georgia Sand Hills and the southern two-thirds of the county is in the Southern Coastal Plain, which is known as the “Flatwoods” region. The latter is dominantly flat and has scattered ridges. Carolina bays, which are basin-like depressions, occur frequently in this region. In contrast, the part of the county in the Carolina and Georgia Sand Hills is higher in elevation, between 270 and 450 feet, and is more dissected as a result of the erosive nature of the soils in this region.

Nearly all of Scotland County is drained by the many tributaries that flow southward to the Lumber River and the Little Pee Dee River. The major tributaries are Gum Swamp, Juniper, Jordans, Big Shoe Heel, and Little Shoe Hill Creeks (Hardison and others, 1909).

Water Supply

Supplies of ground water are adequate in most parts of Scotland County. All incorporated towns in Scotland County have municipal water systems. Rural residences rely on drilled wells for water supplies. Irrigation water for agriculture is supplied by numerous ponds and natural bodies of water.

Climate

Prepared by the Natural Resources Conservation Service, National Water and Climate Center, Portland, Oregon.

Climate data are provided in the tables “Temperature and Precipitation,” “Freeze Dates in Spring and Fall,” and “Growing Season.” The data were recorded at Laurinburg, North Carolina in the period 1971 to 2000. Thunderstorm days, relative humidity, percent sunshine, and wind information were estimated from the First Order station in Charlotte, North Carolina.

In winter, the average temperature is 45.2 degrees F and the average daily minimum temperature is 33.8 degrees. The lowest temperature on record, which occurred at Laurinburg on January 21, 1985, is -3 degrees. In summer, the average temperature is 78.8 degrees and the average daily maximum temperature is 90.0 degrees. The highest recorded temperature, which occurred at Laurinburg on August 18, 1988, is 107 degrees.

Growing degree days are shown in the table “Temperature and Precipitation.” They are equivalent to “heat units.” During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (50 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The total annual precipitation is about 48.28 inches. Of this, 29.58 inches, or 61 percent, usually falls in April through October. The growing season for most crops falls within this period. The heaviest 1-day rainfall on record was 7.65 inches at Laurinburg on October 15, 1954. Thunderstorms occur on about 48 days each year, and most occur in July.

The average seasonal snowfall is about 2.1 inches. The greatest snow depth at any one time during the period of record was 11 inches at Laurinburg on February 10, 1973. The heaviest 1-day snowfall on record was 9.0 inches at Laurinburg on March 3, 1980.On the average, 2 days of the year have at least 1 inch of snow on the ground. The number of such days varies greatly from year to year.

The average relative humidity in mid-afternoon is about 53 percent. Humidity is higher at night, and the average at dawn is about 82 percent. The sun shines 66 percent of the time possible in summer and 56 percent of the time possible in winter. The prevailing wind is from the south. Average wind speed is highest, 8.8 miles per hour, in March.

How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area. The information includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

General Soil Map Units

The general soil map in this publication shows broad areas that have a distinctive pattern of soils, relief, and drainage. Each map unit on the general soil map is a unique natural landscape. Typically, it consists of one or more major soils or miscellaneous areas and some minor soils or miscellaneous areas. It is named for the major soils or miscellaneous areas. The components of one map unit can occur in another but in a different pattern.

The general soil map can be used to compare the suitability of large areas for general land uses. Areas of suitable soils can be identified on the map. Likewise, areas where the soils are not suitable can be identified.

Because of its small scale, the map is not suitable for planning the management of a farm or field or for selecting a site for a road or building or other structure. The soils in any one map unit differ from place to place in slope, depth, drainage, and other characteristics that affect management.

1. Wakulla-Candor-Pelion

Nearly level to moderately steep, moderately well drained to somewhat excessively drained soils that have a 10-to 26-inch thick sandy surface and a sandy or loamy subsoil; on uplands of the Sandhills

Setting

Location in the survey area: Northwestern one-third of the county
Major Land Resource Area: Carolina and Georgia Sand Hills
Landform: Low hills
Position on the landform: Shoulders and side slopes
Slope: 0 to 15 percent

Composition

Percent of the survey area: 37
Wakulla: 45 percent
Candor: 40 percent
Pelion: 13 percent
Minor soils: 2 percent

Soil Characteristics

Wakulla
Surface layer: Dark grayish brown sand
Subsurface layer: Light yellowish brown sand
Subsoil: Strong brown loamy sand
Underlying material: Yellow sand
Depth class: Very deep
Agricultural drainage class: Somewhat excessively drained

Depth to seasonal water saturation: Greater than 6 feet
Parent material: Sandy and loamy marine deposits and eolian sands

Candor
Surface layer: Dark grayish brown sand
Subsurface layer: Light yellowish brown sand
Subsoil: Upper part—yellowish brown loamy sand; lower part—strong brown sandy loam
Depth class: Very deep
Agricultural drainage class: Somewhat excessively drained
Depth to seasonal water saturation: Greater than 6 feet
Parent material: Sandy and loamy marine deposits and eolian sands

Pelion
Surface layer: Grayish brown loamy sand
Subsurface layer: Pale brown loamy sand
Subsoil: Upper part—reddish yellow sandy clay loam; lower part—yellow sandy clay
Underlying material: Yellow sandy loam
Depth class: Moderately deep to deep to fragic soil properties
Agricultural drainage class: Moderately well drained
Parent material: Loamy marine deposits

Minor soils
- The well drained Autryville soils on ridgetops
- The very poorly drained Johnston soils on flood plains
- The well drained Ailey soils on ridges and side slopes
- The poorly and very poorly drained Plummer soils on flats and in depressions

Use and Management

Major uses: Woodland, pasture and hayland, and cropland

Cropland
Management concerns: Droughtiness, erosion, slope, excessive sandiness, and leaching of nutrients

Pasture and hayland
Management concerns: Droughtiness, slope, erosion, and leaching of nutrients

Woodland
Management concerns: Erosion, equipment limitations, and seedling survival

Urban development
Management concerns: Rapid permeability, slope, erosion, and droughtiness; Pelion—seasonal high water table

2. Wagram-Noboco-Norfolk

Nearly level to gently sloping, moderately well drained or well drained soils that have a sandy surface and a loamy subsoil; on uplands of the Upper Coastal Plain

Setting

Location in the survey area: Southern two-thirds of the county
Major Land Resource Area: Southern Coastal Plain
Landform: Ridges, flats, and broad interstream divides
Slope: 0 to 6 percent

Composition

Percent of the survey area: 33
  Wagram: 21 percent
  Noboco: 15 percent
  Norfolk: 14 percent
  Minor soils: 50 percent

Soil Characteristics

Wagram
Surface layer: Grayish brown loamy sand
Subsurface layer: Pale brown loamy sand
Subsoil: Upper part—yellowish brown sandy loam; lower part—yellowish brown sandy clay loam
Depth class: Very deep
Agricultural drainage class: Well drained
Parent material: Sandy and loamy marine deposits

Noboco
Surface layer: Dark grayish brown loamy sand
Subsurface layer: Pale brown loamy sand
Subsoil: Yellowish brown sandy clay loam
Depth class: Very deep
Agricultural drainage class: Moderately well drained or well drained
Parent material: Loamy marine deposits

Norfolk
Surface layer: Grayish brown loamy sand
Subsurface layer: Yellowish brown loamy sand
Subsoil: Upper part—yellowish brown sandy loam; lower part—yellowish brown sandy clay loam
Underlying material: Variegated sandy clay loam
Depth class: Very deep
Agricultural drainage class: Well drained
Parent material: Loamy marine deposits

Minor soils
- The well drained Autryville soils on ridgetops
- The very poorly drained Johnston soils on flood plains
- The somewhat excessively drained Blanton soils on ridges and side slopes
- The poorly drained Rains soils in depressions

Use and Management

Major uses: Woodland, pasture and hayland, and cropland

Cropland
Management concerns: Slope, hazard of erosion, surface runoff, and nutrient loss

Pasture and hayland
Management concerns: Slope, hazard of erosion, surface runoff, and nutrient loss

Woodland
Management concerns: No significant limitations

Urban development
Management concerns: No significant limitations

3. Coxville-McColl

Nearly level, poorly drained soils that have a loamy surface and loamy to clayey subsoil; on upland flats and depressions of the Coastal Plain

Setting

Location in the survey area: Central and south-central part of the county
Major Land Resource Area: Southern Coastal Plain
Landform: Carolina bays and depressions
Slope: 0 to 2 percent

Composition

Percent of the survey area: 10
Coxville: 20 percent
McColl: 14 percent
Minor soils: 66 percent

Soil Characteristics

Coxville
Surface layer: Dark gray fine sandy loam
Subsurface layer: Gray fine sandy loam
Subsoil: Gray sandy clay
Underlying material: Stratified sand, silt, and clay
Depth class: Very deep
Agricultural drainage class: Poorly drained
Parent material: Clayey marine deposits

McColl
Surface layer: Very dark gray loam
Subsoil: Upper part—light brownish gray sandy clay loam; next part—light brownish gray clay; lower part—strong brown sandy clay loam
Underlying material: Light gray sandy loam
Depth class: Moderately deep to fragic soil properties
Agricultural drainage class: Poorly drained
Parent material: Clayey marine deposits

Minor soils
- The moderately well drained or well drained Noboco soils on ridges
- The somewhat poorly drained Dunbar soils, the poorly drained Rains soils, and the moderately well drained Duplin soils on flats
- The somewhat excessively drained to moderately well drained Blanton soils on uplands

Use and Management

Major uses: Woodland, pasture and hayland, and cropland

Cropland
Management concerns: High clay content and seasonal high water table

Pasture and hayland
Management concerns: Seasonal high water table

Woodland
Management concerns: Seasonal high water table

Urban development
Management concerns: Seasonal high water table

4. Autryville-Blanton

Nearly level to moderately steep, moderately well drained to somewhat excessively drained soils that have a sandy surface and a loamy subsoil; on uplands of the Coastal Plain

Setting

Location in the survey area: Eastern and south-central parts of the county
Major Land Resource Area: Southern Coastal Plain
Landform: Ridges, uplands, and marine terraces
Slope: 0 to 15 percent

Composition

Percent of the survey area: 9
Autryville: 30 percent
Blanton: 23 percent
Minor soils: 47 percent

Soil Characteristics

Autryville
Surface layer: Grayish brown loamy sand
Subsurface layer: Pale brown loamy sand
Subsoil: Upper part—yellowish brown sandy loam; next part—brownish yellow loamy sand; lower part—brownish yellow sandy clay loam
Underlying material: Stratified sandy and loamy material
Depth class: Very deep
Agricultural drainage class: Well drained
Parent material: Sandy and loamy marine deposits

Blanton
Surface layer: Gray fine sand
Subsurface layer: Very pale brown fine sand
Subsoil: Upper part—light yellowish brown fine sandy loam; next part—light gray fine sand; lower part—light brownish gray fine sandy loam
Depth class: Very deep
Agricultural drainage class: Somewhat excessively drained to moderately well drained
Parent material: Sandy and loamy marine deposits

Minor soils
- The well drained Wagram soils on ridges
- The well drained Bragg soils in disturbed areas on ridges
- The very poorly drained Johnston soils on flood plains
- The poorly drained Plummer soils in depressions
- The poorly drained Rains soils on flats

Use and Management

Major uses: Woodland, pasture and hayland, and cropland

Cropland
Management concerns: Droughtiness, erosion, slope, excessive sandiness, and leaching of nutrients

Pasture and hayland
Management concerns: Droughtiness, slope, erosion, and leaching of nutrients

Woodland
Management concerns: Erosion, equipment limitations, and seedling survival

Urban development
Management concerns: Rapid permeability, slope, erosion, and droughtiness

5. Rutlege-Johnston-Kenansville

Nearly level, very poorly drained to moderately well drained soils that have a sandy or loamy surface and have loamy or sandy underlying material; on floodplains and terraces of the Coastal Plain and Sandhills

Setting

Location in the survey area: Along drainageways in the southern two-thirds of the county and along the eastern county line
Major Land Resource Area: Carolina and Georgia Sand Hills and Southern Coastal Plain
Landform: Flood plains and terraces
Slope: 0 to 4 percent

Composition

Percent of the survey area: 7
Rutlege: 16 percent
Johnston: 14 percent
Kenansville: 13 percent
Minor soils: 57 percent

Soil Characteristics

Rutlege
Surface layer: Black sandy loam
Underlying material: Dark gray and grayish brown sand
Depth class: Very deep
Agricultural drainage class: Very poorly drained
Parent material: Marine or fluvial sediments

Johnston
Surface layer: Black mucky loam
Underlying material: Gray loamy fine sand and fine sandy loam
Depth class: Very deep
Agricultural drainage class: Very poorly drained
Flooding: Frequent for long periods
Parent material: Sandy and loamy alluvium

Kenansville
Surface layer: Grayish brown loamy sand
Subsurface layer: Light yellowish brown loamy sand
Subsoil: Yellowish brown sandy loam
Underlying material: Very pale brown sand
Depth class: Moderately deep to sandy, contrasting materials
Agricultural drainage class: Moderately well drained
Parent material: Loamy alluvium over sandy alluvium

Minor soils
- The moderately well drained Johns soils, the poorly drained Lumbee soils, and the very poorly drained Paxville soils on stream terraces

Use and Management

Major uses: Woodland

Cropland
Management concerns: Seasonal high water table and flooding

Pasture and hayland
Management concerns: Seasonal high water table and flooding

Woodland
Management concerns: Seasonal high water table and flooding

Urban development
Management concerns: Flooding

6. Johnston-Pamlico

Nearly level, very poorly drained soils that have a loamy surface and have sandy or loamy underlying material; on floodplains of the Coastal Plain and Sandhills

Setting

Location in the survey area: Along drainageways in the southeastern part of the county and along the northeastern county line
Major Land Resource Area: Carolina and Georgia Sand Hills and Southern Coastal Plain
Landform: Flood plains
Slope: 0 to 2 percent

Composition

Percent of the survey area: 4
Johnston: 39 percent
Pamlico: 38 percent
Minor soils: 23 percent

Soil Characteristics

Johnston
Surface layer: Black mucky loam
Underlying material: Gray loamy fine sand and fine sandy loam
Depth class: Very deep
Agricultural drainage class: Very poorly drained
Flooding: Frequent; for long periods
Parent material: Sandy and loamy alluvium

Pamlico
Surface layer: Very dark brown to very dark grayish brown fibric and sapric material
Underlying material: Very dark grayish brown loamy sand
Depth class: Very deep
Agricultural drainage class: Very poorly drained
Flooding: Frequent; for very long periods
Parent material: Organic material over sandy material

Minor soils
- The well drained Ailey and Autryville soils on shoulders and side slopes
- The very poorly drained Rutlege soils on toeslopes

Use and Management

Major uses: Woodland

Cropland
Management concerns: Seasonal high water table and flooding

Pasture and hayland
Management concerns: Seasonal high water table and flooding

Woodland
Management concerns: Seasonal high water table and flooding

Urban development
Management concerns: Flooding and ponding

Detailed Soil Map Units

The map units delineated on the detailed soil maps in this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The contrasting components are mentioned in the map unit descriptions. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives the principal hazards and limitations to be considered in planning for specific uses.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis

of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Goldsboro loamy sand, 0 to 2 percent slopes, is a phase of the Goldsboro series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Wakulla-Rimini complex, 0 to 10 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Candor and Wakulla soils, 8 to 15 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Pamlico and Johnston soils, 0 to 1 percent slopes, is an undifferentiated group in this survey area.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Udorthents, borrow pits is an example.

The table “Acreage and Proportionate Extent of the Soils” lists the map units in this survey area. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils.

AeB—Ailey loamy sand, 0 to 8 percent slopes

Setting

Major Land Resource Area: Carolina and Georgia Sand Hills
Landform: Low hills
Elevation: 164 to 656 feet

Map Unit Composition

Ailey and similar soils: Typically 85 percent

Typical Profile

Surface layer:
0 to 5 inches; loamy sand

Subsurface layer:
5 to 24 inches; loamy sand

Subsoil layer:
24 to 36 inches; sandy clay loam
36 to 50 inches; sandy clay loam

Underlying material:
50 to 80 inches; sandy loam

Soil Properties and Qualities

Available water capacity: Very low (about 2.3 inches)
Slowest saturated hydraulic conductivity: Moderately low (about 0.06 in/hr)
Depth class: Very deep
Depth to root restrictive feature: 26 to 60 inches to fragipan
Agricultural drainage class: Well drained
Depth to seasonal water saturation: More than 6.0 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Sandy and loamy marine deposits
Hydric inclusions: Bibb and Johnston soils

Use and Management Considerations

Cropland
Suitability: Moderately suited to cotton lint; poorly suited to corn, soybeans, and wheat
- Slope increases surface runoff, erosion hazard, and nutrient loss.
- The limited available water capacity may cause plants to suffer from moisture stress.
- Sandy or coarse-textured layers accelerate the rate at which plant nutrients are leached.
- Soil crusting decreases water infiltration and interferes with the emergence of seedlings.

Pasture
Suitability: Well suited
- Slope increases erosion hazard, surface runoff, and nutrient loss.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland
Suitability: Well suited to loblolly pine
- The slope may restrict the use of some mechanical planting equipment.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.
- The dense nature of the subsurface layer increases the difficulty of digging and compacting the soil material in shallow excavations.

Septic tank absorption fields
- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The limited depth to a fragipan affects the ease of excavation and grading.

Interpretative Groups

Land capability class: 3s
Hydric soil: No
Prime farmland: Not prime farmland

AeC—Ailey loamy sand, 8 to 15 percent slopes

Setting

Major Land Resource Area: Carolina and Georgia Sand Hills
Landform: Low hills
Elevation: 164 to 656 feet

Map Unit Composition

Ailey and similar soils: Typically 85 percent

Typical Profile

Surface layer:
0 to 5 inches; loamy sand

Subsurface layer:
5 to 24 inches; loamy sand

Subsoil layer:
24 to 36 inches; sandy clay loam
36 to 50 inches; sandy clay loam

Underlying material:
50 to 80 inches; sandy loam

Soil Properties and Qualities

Available water capacity: Very low (about 2.3 inches)
Slowest saturated hydraulic conductivity: Moderately low (about 0.06 in/hr)
Depth class: Very deep
Depth to root restrictive feature: 26 to 60 inches to fragipan
Agricultural drainage class: Well drained
Depth to seasonal water saturation: More than 6.0 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Sandy and loamy marine deposits
Hydric inclusions: Bibb and Johnston soils

Use and Management Considerations

Cropland
Suitability: Moderately suited to cotton lint; poorly suited to corn, soybeans, peanuts, and wheat
- Slope increases surface runoff, erosion hazard, and nutrient loss.
- The limited available water capacity may cause plants to suffer from moisture stress.
- Sandy or coarse-textured layers accelerate the rate at which plant nutrients are leached.
- Soil crusting decreases water infiltration and interferes with the emergence of seedlings.

Pasture
Suitability: Well suited
- Slope increases erosion hazard, surface runoff, and nutrient loss.

- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland
Suitability: Well suited to loblolly pine
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The slope influences the use of machinery and the amount of excavation required.
- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.
- The dense nature of the subsurface layer increases the difficulty of digging and compacting the soil material in shallow excavations.

Septic tank absorption fields
- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets
- The limited depth to a fragipan affects the ease of excavation and grading.
- Designing local roads and streets is difficult because of the slope.

Interpretative Groups

Land capability class: 4s
Hydric soil: No
Prime farmland: Not prime farmland

AuB—Autryville sand, 0 to 6 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Ridges and uplands
Elevation: 82 to 328 feet

Map Unit Composition

Autryville and similar soils: Typically 80 percent

Typical Profile

Surface layer:
0 to 9 inches; sand

Subsurface layer:
9 to 26 inches; loamy sand

Subsoil layer:
26 to 46 inches; loamy sand
46 to 58 inches; loamy sand
58 to 85 inches; sandy clay loam

Soil Properties and Qualities

Available water capacity: Low (about 5.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Well drained
Depth to seasonal water saturation: From 4.0 to 6.0 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very low
Surface fragments: None
Parent material: Sandy and loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to cotton lint; moderately suited to corn, soybeans, peanuts, and wheat
- Sandy or coarse-textured layers accelerate the rate at which plant nutrients are leached.
- Soil crusting decreases water infiltration and interferes with the emergence of seedlings.

Pasture
Suitability: Well suited

Woodland
Suitability: Moderately suited to loblolly pine; poorly suited to southern red oak and sweetgum
- Coarse-textured layers increase the maintenance of haul roads and log landings.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The excessive permeability limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets
- This soil is well suited to local roads and streets.

Interpretative Groups

Land capability class: 2s
Hydric soil: No
Prime farmland: Not prime farmland

BaA—Bibb soils, 0 to 2 percent slopes, frequently flooded

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Flood plains
Elevation: 82 to 328 feet

Map Unit Composition

Bibb and similar soils: Typically 80 percent

Typical Profile

Surface layer:
0 to 6 inches; loamy sand

Underlying material:
6 to 60 inches; sandy loam
60 to 80 inches; loamy sand

Soil Properties and Qualities

Available water capacity: Moderate (about 7.2 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Poorly drained
Depth to seasonal water saturation: From 0.0 to 1.0 foot
Water table kind: Apparent
Flooding hazard: Frequent
Ponding hazard: None
Depth of ponding: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Sandy and loamy alluvium

Use and Management Considerations

Cropland
Suitability: Unsuited to cropland

Pasture
Suitability: Poorly suited
- Flooding may damage pastures.
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

Woodland
Suitability: Well suited to loblolly pine; moderately suited to sweetgum; poorly suited to yellow-poplar
- Flooding may result in damage to haul roads.
- The low soil strength interferes with the construction of haul roads and log landings.
- Flooding and ponding restrict the safe use of roads by log trucks.
- The low soil strength may create unsafe conditions for log trucks.

Building sites
- Flooding and ponding make this soil unsuited to building site development.

Septic tank absorption fields
- Flooding and ponding make this soil unsuited to septic tank absorption fields.

Local roads and streets
- Flooding may damage local roads and streets.
- Ponding affects the ease of excavation and grading and limits the bearing capacity of the soil.

Interpretative Groups

Land capability class: 5w
Hydric soil: Yes
Prime farmland: Not prime farmland

BlC—Blanton sand, 8 to 15 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Marine terraces
Elevation: 82 to 328 feet

Map Unit Composition

Blanton and similar soils: Typically 100 percent

Typical Profile

Surface layer:
0 to 7 inches; sand

Subsurface layer:
7 to 52 inches; sand

Subsoil layer:
52 to 67 inches; sandy loam
67 to 85 inches; sandy clay loam

Soil Properties and Qualities

Available water capacity: Low (about 3.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Moderately well drained
Depth to seasonal water saturation: From 4.0 to 6.0 feet
Water table kind: Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Sandy and loamy fluviomarine deposits and eolian sands

Use and Management Considerations

Cropland
Suitability: Unsuited to cropland

Pasture
Suitability: Well suited

- Slope increases erosion hazard, surface runoff, and nutrient loss.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland
Suitability: Well suited to loblolly pine; poorly suited to southern red oak
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The slope influences the use of machinery and the amount of excavation required.
- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets
- Designing local roads and streets is difficult because of the slope.

Interpretative Groups

Land capability class: 6s
Hydric soil: No
Prime farmland: Not prime farmland

BrB—Bragg loamy sand, 1 to 4 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Low hills, scalped areas, leveled lands, impact craters, and Sandhills
Elevation: 164 to 656 feet

Map Unit Composition

Bragg and similar soils: Typically 90 percent

Typical Profile

Surface layer:
0 to 6 inches; loamy sand

Underlying material:
6 to 30 inches; sandy clay loam
30 to 80 inches; sandy loam

Soil Properties and Qualities

Available water capacity: Moderate (about 7.5 inches)

Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Well drained
Depth to seasonal water saturation: More than 6.0 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Loamy mine spoil or earthy fill material

Use and Management Considerations

Cropland
Suitability: Poorly suited
- Slope increases surface runoff, erosion hazard, and nutrient loss.

Pasture
Suitability: Poorly suited
- Slope increases erosion hazard, surface runoff, and nutrient loss.

Woodland
Suitability: Poorly suited to loblolly pine
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- This soil is well suited to building sites.

Septic tank absorption fields
- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- This soil is well suited to local roads and streets; however, these areas are typically located in impact areas on military reservations.

Interpretative Groups

Land capability class: 3e
Hydric soil: No
Prime farmland: Not prime farmland

CaC—Candor and Wakulla soils, 8 to 15 percent slopes

Setting

Major Land Resource Area: Carolina and Georgia Sand Hills
Landform: Low hills
Elevation: 164 to 656 feet

Map Unit Composition

Candor and similar soils: Typically 40 percent
Wakulla and similar soils: Typically 40 percent

Typical Profile

Candor
Surface layer:
0 to 8 inches; sand

Subsurface layer:
8 to 26 inches; sand

Subsoil layer:
26 to 38 inches; loamy sand
38 to 62 inches; sand
62 to 80 inches; sandy clay loam

Wakulla
Surface layer:
0 to 7 inches; sand

Subsurface layer:
7 to 24 inches; sand

Subsoil layer:
24 to 42 inches; loamy sand

Underlying material:
42 to 85 inches; sand

Soil Properties and Qualities

Available water capacity: Candor—very low (about 2.9 inches); Wakulla—very low (about 2.7 inches)
Slowest saturated hydraulic conductivity: Candor—moderately high (about 0.57 in/hr); Wakulla—high (about 5.95 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6.0 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Sandy and loamy marine deposits and eolian sands
Hydric inclusions: Bibb and Johnston soils

Use and Management Considerations

Cropland
Suitability: Moderately suited to cotton lint; poorly suited to corn, soybeans, peanuts, and wheat
- Slope increases surface runoff, erosion hazard, and nutrient loss.
- Sandy or coarse-textured layers accelerate the rate at which plant nutrients are leached.
- Soil crusting decreases water infiltration and interferes with the emergence of seedlings.

Pasture
Suitability: Well suited
- Slope increases erosion hazard, surface runoff, and nutrient loss.

Woodland
Suitability: Poorly suited to loblolly pine
- Coarse-textured layers in the soils increase the need for maintenance of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soils may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The slope influences the use of machinery and the amount of excavation required.
- The high content of sand or gravel in the soils increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets
- Designing local roads and streets is difficult because of the slope.

Interpretative Groups

Land capability class: Candor—4s; Wakulla—3s
Hydric soil: No
Prime farmland: Not prime farmland

CoA—Coxville loam, 0 to 2 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Carolina bays and depressions
Elevation: 82 to 328 feet

Map Unit Composition

Coxville, drained, and similar soils: Typically 80 percent
Coxville, undrained, and similar soils: Typically 10 percent

Typical Profile

Surface layer:
0 to 9 inches; loam

Subsurface layer:
9 to 11 inches; loam

Subsoil layer:
11 to 72 inches; sandy clay

Underlying material:
72 to 80 inches; sandy clay loam

Soil Properties and Qualities

Available water capacity: Moderate (about 7.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Very deep

Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Poorly drained
Depth to seasonal water saturation: From 0.0 to 1.0 foot
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Clayey marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to soybeans; moderately suited to corn and wheat; poorly suited to peanuts
- The high clay content restricts the rooting depth of crops.
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pasture
Suitability: Well suited
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

Woodland
Suitability: Well suited to loblolly pine; moderately suited to sweetgum
- The low soil strength interferes with the construction of haul roads and log landings.
- Soil wetness may limit the use of the soil by log trucks.
- The low soil strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields
- The seasonal high water table makes this soil unsuited to conventional septic tank absorption fields.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- The low soil strength is unfavorable for supporting heavy loads.

Interpretative Groups

Land capability class: Coxville, drained—3w; Coxville, undrained—4w
Hydric soil: Yes
Prime farmland: Not prime farmland

DbA—Dunbar fine sandy loam, 0 to 2 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Flats and broad interstream divides
Elevation: 82 to 328 feet

Map Unit Composition

Dunbar, drained, and similar soils: Typically 80 percent
Dunbar, undrained, and similar soils: Typically 10 percent

Typical Profile

Surface layer:
0 to 8 inches; fine sandy loam

Subsoil layer:
8 to 14 inches; clay loam
14 to 62 inches; sandy clay

Underlying material:
62 to 92 inches; sandy clay

Soil Properties and Qualities

Available water capacity: High (about 9.4 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Somewhat poorly drained
Depth to seasonal water saturation: From 1.0 to 2.0 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Very high
Surface fragments: None
Parent material: Clayey marine deposits
Hydric inclusions: Coxville and Rains soils

Use and Management Considerations

Cropland
Suitability: Well suited to cotton lint and soybeans; moderately suited to corn, peanuts, and wheat
- The high clay content restricts the rooting depth of crops.
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pasture
Suitability: Well suited
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

Woodland
Suitability: Well suited
- This soil is well suited to roads and landings.
- Soil wetness may limit the use of the soil by log trucks.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- Shrinking and swelling restrict the use of the soil as base material for local roads and streets.
- The low soil strength is unfavorable for supporting heavy loads.

Interpretative Groups

Land capability class: 2w
Hydric soil: No
Prime farmland: Not prime farmland

DpA—Duplin sandy loam, 0 to 2 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Flats and broad interstream divides
Elevation: 82 to 328 feet

Map Unit Composition

Duplin and similar soils: Typically 85 percent

Typical Profile

Surface layer:
0 to 8 inches; sandy loam

Subsoil layer:
8 to 84 inches; sandy clay

Underlying material:
84 to 100 inches; sandy clay loam

Soil Properties and Qualities

Available water capacity: High (about 9.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Moderately well drained
Depth to seasonal water saturation: From 2.0 to 3.0 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Low
Surface fragments: None
Parent material: Clayey marine deposits
Hydric inclusions: Rains and Coxville soils

Use and Management Considerations

Cropland
Suitability: Well suited to cotton lint, soybeans, and wheat; moderately suited to corn and peanuts

- The high clay content restricts the rooting depth of crops.

Pasture
Suitability: Well suited to pasture

Woodland
Suitability: Well suited to loblolly pine; poorly suited to southern red oak, yellow-poplar, and sweetgum
- This soil is well suited to roads and landings.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- Shrinking and swelling restrict the use of the soil as base material for local roads and streets.
- The low soil strength is unfavorable for supporting heavy loads.

Interpretative Groups

Land capability class: 2w
Hydric soil: No
Prime farmland: Prime farmland in all areas

GoA—Goldsboro loamy sand, 0 to 2 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Flats and broad interstream divides
Elevation: 82 to 328 feet

Map Unit Composition

Goldsboro and similar soils: Typically 90 percent

Typical Profile

Surface layer:
0 to 8 inches; loamy sand

Subsurface layer:
8 to 15 inches; loamy sand

Subsoil layer:
15 to 45 inches; sandy clay loam
45 to 80 inches; sandy clay loam

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)

Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Moderately well drained
Depth to seasonal water saturation: From 2.0 to 3.0 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Loamy marine deposits
Hydric inclusions: Rains soil

Use and Management Considerations

Cropland
*Suitability:*Well suited to corn, cotton lint, soybeans, peanuts, and wheat
- Excessive permeability increases the risk of groundwater contamination.

Pasture
Suitability: Well suited to pasture

Woodland
Suitability: Well suited to loblolly pine; poorly suited to southern red oak, yellow-poplar, and sweetgum
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.

Interpretative Groups

Land capability class: 2w
Hydric soil: No
Prime farmland: Prime farmland in all areas

GrB—Gritney sandy loam, 2 to 6 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Ridges
Elevation: 82 to 328 feet

Map Unit Composition

Gritney and similar soils: Typically 80 percent

Typical Profile

Surface layer:
0 to 9 inches; fine sandy loam

Subsoil layer:
9 to 58 inches; clay

Underlying material:
58 to 80 inches; sandy clay loam

Soil Properties and Qualities

Available water capacity: Moderate (about 7.9 inches)
Slowest saturated hydraulic conductivity: Low (about 0.00 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Moderately well drained
Depth to seasonal water saturation: From 1.5 to 3.0 feet
Water table kind: Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Low
Surface fragments: None
Parent material: Clayey marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to cotton lint; moderately suited to corn, soybeans, peanuts, and wheat
- Slope increases surface runoff, erosion hazard, and nutrient loss.
- The high clay content restricts the rooting depth of crops.

Pasture
Suitability: Well suited
- Slope increases erosion hazard, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine; poorly suited to southern red oak, yellow-poplar, and sweetgum
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to drier periods.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- Shrinking and swelling restrict the use of the soil as base material for local roads and streets.
- The low soil strength is unfavorable for supporting heavy loads.

Interpretative Groups

Land capability class: 3e
Hydric soil: No
Prime farmland: Prime farmland in all areas

GrC—Gritney sandy loam, 6 to 10 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Ridges
Elevation: 82 to 328 feet

Map Unit Composition

Gritney and similar soils: Typically 80 percent

Typical Profile

Surface layer:
0 to 9 inches; fine sandy loam

Subsoil layer:
9 to 58 inches; clay

Underlying material:
58 to 80 inches; sandy clay loam

Soil Properties and Qualities

Available water capacity: Moderate (about 7.9 inches)
Slowest saturated hydraulic conductivity: Low (about 0.00 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Moderately well drained
Depth to seasonal water saturation: From 1.5 to 3.0 feet
Water table kind: Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Medium
Surface fragments: None
Parent material: Clayey marine deposits
Hydric inclusions: Bibb soil

Use and Management Considerations

Cropland
Suitability: Well suited to cotton lint and peanuts; moderately suited to corn and wheat; poorly suited to soybeans

- Slope increases surface runoff, erosion hazard, and nutrient loss.
- The high clay content restricts the rooting depth of crops.

Pasture
Suitability: Well suited
- Slope increases erosion hazard, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine; poorly suited to southern red oak, yellow-poplar, and sweetgum
- The low soil strength interferes with the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.
- The stickiness of the soil restricts the use of equipment for site preparation to drier periods.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The slope influences the use of machinery and the amount of excavation required.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- Shrinking and swelling restrict the use of the soil as base material for local roads and streets.
- The low soil strength is unfavorable for supporting heavy loads.
- Designing local roads and streets is difficult because of the slope.

Interpretative Groups

Land capability class: 4e
Hydric soil: No
Prime farmland: Not prime farmland

JmA—Johnston soils, 0 to 2 percent slopes, frequently flooded

Setting

Major Land Resource Area: Carolina and Georgia Sand Hills and Southern Coastal Plain
Landform: Flood plains
Elevation: 82 to 328 feet

Map Unit Composition

Johnston, undrained, and similar soils: Typically 80 percent
Johnston, drained, and similar soils: Typically 10 percent

Typical Profile

Surface layer:
0 to 30 inches; mucky loam

Underlying material:
30 to 34 inches; loamy fine sand
34 to 80 inches; fine sandy loam

Soil Properties and Qualities

Available water capacity: High (about 9.4 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Very poorly drained
Depth to seasonal water saturation: At the surface
Water table kind: Apparent
Flooding hazard: Frequent
Ponding hazard: Frequent
Depth of ponding: 0.0 to 1.0 foot
Shrink-swell potential: Low
Runoff class: Negligible
Surface fragments: None
Parent material: Sandy and loamy alluvium

Use and Management Considerations

Cropland
Suitability: Unsuited to cropland

Pasture
Suitability: Unsuited to pasture

Woodland
Suitability: Well suited to loblolly pine; moderately suited to yellow-poplar and sweetgum; poorly suited to baldcypress
- Flooding may result in damage to haul roads.
- The low soil strength interferes with the construction of haul roads and log landings.
- Flooding and ponding restrict the safe use of roads by log trucks.
- The low soil strength may create unsafe conditions for log trucks.

Building sites
- Flooding and ponding make this soil unsuited to building site development.

Septic tank absorption fields
- Flooding and ponding make this soil unsuited to septic tank absorption fields.

Local roads and streets
- Flooding may damage local roads and streets.
- Ponding affects the ease of excavation and grading and limits the bearing capacity of the soil.

Interpretative Groups

Land capability class: Johnston, undrained—7w; Johnston, drained—4w

Hydric soil: Yes
Prime farmland: Not prime farmland

JoA—Johns fine sandy loam, 0 to 2 percent slopes, rarely flooded

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Stream terraces
Elevation: 82 to 328 feet

Map Unit Composition

Johns and similar soils: Typically 85 percent

Typical Profile

Surface layer:
0 to 8 inches; fine sandy loam

Subsurface layer:
8 to 15 inches; fine sandy loam

Subsoil layer:
15 to 32 inches; sandy clay loam

Underlying material:
32 to 80 inches; sand

Soil Properties and Qualities

Available water capacity: Low (about 4.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep
Depth to root restrictive feature: 20 to 40 inches to strongly contrasting textural stratification
Agricultural drainage class: Moderately well drained
Depth to seasonal water saturation: From 1.5 to 3.0 feet
Water table kind: Apparent
Flooding hazard: Rare
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Loamy alluvium over sandy alluvium
Hydric inclusions: Lumbee soil

Use and Management Considerations

Cropland
Suitability: Well suited to cotton lint and soybeans; moderately suited to corn, peanuts, and wheat
- The limited available water capacity may cause plants to suffer from moisture stress.
- Excessive permeability increases the risk of groundwater contamination.

Pasture
Suitability: Well suited
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland

Suitability: Well suited to loblolly pine; poorly suited to sweetgum
- This soil is well suited to roads and landings.
- This soil is well suited to equipment operations.

Building sites
- Flooding makes this soil unsuited to building site development.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The excessive permeability limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.

Interpretative Groups

Land capability class: 2w
Hydric soil: No
Prime farmland: Prime farmland if drained

KaA—Kalmia loamy sand, 0 to 2 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Low stream terraces
Elevation: 82 to 328 feet

Map Unit Composition

Kalmia and similar soils: Typically 90 percent

Typical Profile

Surface layer:
0 to 8 inches; loamy sand

Subsurface layer:
8 to 12 inches; loamy sand

Subsoil layer:
12 to 32 inches; sandy clay loam

Underlying material:
32 to 80 inches; loamy sand

Soil Properties and Qualities

Available water capacity: Low (about 3.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep
Depth to root restrictive feature: 20 to 40 inches to strongly contrasting textural stratification
Agricultural drainage class: Well drained
Depth to seasonal water saturation: More than 6.0 feet
Flooding hazard: None
Ponding hazard: None

Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Loamy alluvium over sandy alluvium
Hydric inclusions: Lumbee soil

Use and Management Considerations

Cropland
Suitability: Well suited to cotton lint, soybeans, peanuts, and wheat; moderately suited to corn
- The limited available water capacity may cause plants to suffer from moisture stress.

Pasture
Suitability: Well suited
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland
Suitability: Well suited to loblolly pine; moderately suited to yellow-poplar and sweetgum; poorly suited to southern red oak
- This soil is well suited to roads and landings.
- This soil is well suited to equipment operations.

Building sites
- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields
- The excessive permeability limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets
- This soil is well suited to roads and streets.

Interpretative Groups

Land capability class: 1
Hydric soil: No
Prime farmland: Prime farmland in all areas

KnB—Kenansville loamy sand, moderately wet, 0 to 4 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Stream terraces
Elevation: 82 to 328 feet

Map Unit Composition

Kenansville and similar soils: Typically 90 percent

Typical Profile

Surface layer:
0 to 8 inches; loamy sand

Subsurface layer:
8 to 24 inches; loamy sand

Subsoil layer:
24 to 36 inches; sandy loam

Underlying material:
36 to 84 inches; sand

Soil Properties and Qualities

Available water capacity: Low (about 3.9 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Well drained
Depth to seasonal water saturation: From 4.0 to 6.0 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very low
Surface fragments: None
Parent material: Loamy alluvium over sandy alluvium
Hydric inclusions: Lumbee soil

Use and Management Considerations

Cropland
Suitability: Well suited to cotton lint; moderately suited to soybeans and peanuts; poorly suited to corn and wheat
- The limited available water capacity may cause plants to suffer from moisture stress.
- Sandy or coarse-textured layers accelerate the rate at which plant nutrients are leached.

Pasture
Suitability: Well suited
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland
Suitability: Moderately suited to loblolly pine
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The excessive permeability limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets
- This soil is well suited to local roads and streets.

Interpretative Groups

Land capability class: 2s
Hydric soil: No
Prime farmland: Not prime farmland

LuA—Lumbee sandy loam, 0 to 2 percent slopes, rarely flooded

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Stream terraces
Elevation: 82 to 328 feet

Map Unit Composition

Lumbee, drained, and similar soils: Typically 80 percent
Lumbee, undrained, and similar soils: Typically 10 percent

Typical Profile

Surface layer:
0 to 6 inches; sandy loam

Subsurface layer:
6 to 14 inches; sandy loam

Subsoil layer:
14 to 36 inches; sandy clay loam

Underlying material:
36 to 80 inches; loamy sand

Soil Properties and Qualities

Available water capacity: Low (about 3.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep
Depth to root restrictive feature: 20 to 40 inches to strongly contrasting textural stratification
Agricultural drainage class: Poorly drained
Depth to seasonal water saturation: From 0.0 to 1.0 foot
Water table kind: Apparent
Flooding hazard: Rare
Ponding hazard: Lumbee, drained—none; Lumbee, undrained—Occasional
Depth of ponding: Lumbee, undrained—0.0 to 1.0 foot
Shrink-swell potential: Low
Runoff class: Lumbee, drained—very high; Lumbee, undrained—negligible
Surface fragments: None
Parent material: Loamy alluvium over sandy alluvium

Use and Management Considerations

Cropland
Suitability: Well suited to cotton lint and soybeans; moderately suited to corn and wheat; poorly suited to peanuts

- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pasture
Suitability: Well suited
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

Woodland
Suitability:
- This soil is well suited to roads and landings.
- Ponding restricts the safe use of roads by log trucks.

Building sites
- Flooding and ponding make the soil unsuited to building site development.

Septic tank absorption fields
- Ponding makes this soil unsuited to septic tank absorption fields.

Local roads and streets
- Ponding affects the ease of excavation and grading and limits the bearing capacity of the soil.

Interpretative Groups

Land capability class: Lumbee, drained—3w; Lumbee, undrained—6w
Hydric soil: Yes
Prime farmland: Prime farmland if drained

LyA—Lynchburg sandy loam, 0 to 2 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Flats and broad interstream divides
Elevation: 82 to 328 feet

Map Unit Composition

Lynchburg and similar soils: Typically 85 percent

Typical Profile

Surface layer:
0 to 6 inches; sandy loam

Subsurface layer:
6 to 10 inches; sandy loam

Subsoil layer:
10 to 65 inches; sandy clay loam
65 to 80 inches; clay

Soil Properties and Qualities

Available water capacity: Moderate (about 7.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Somewhat poorly drained
Depth to seasonal water saturation: From 0.0 to 1.5 feet

Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Loamy marine deposits
Hydric inclusions: Toisnot, Rains, Woodington, and Coxville soils

Use and Management Considerations

Cropland
Suitability: Well suited to cotton lint, soybeans, and peanuts; moderately suited to corn and wheat
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pasture
Suitability: Well suited
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

Woodland
Suitability: Well suited to loblolly pine; moderately suited to yellow-poplar and sweetgum; poorly suited to southern red oak
- Soil wetness may limit the use of the soil by log trucks.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.

Interpretative Groups

Land capability class: 2w
Hydric soil: No
Prime farmland: Prime farmland if drained

M-W—Miscellaneous water

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Unspecified

Typical Pedon

This map unit mainly consists of animal waste lagoons. This map unit is not assigned any interpretive groups.

MaA—Mantachie soils, 0 to 2 percent slopes, rarely flooded

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Flood plains
Elevation: 82 to 328 feet

Map Unit Composition

Mantachie and similar soils: Typically 90 percent

Typical Profile

Surface layer:
0 to 18 inches; loam

Subsoil layer:
18 to 80 inches; fine sandy loam

Soil Properties and Qualities

Available water capacity: High (about 10.4 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.60 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Somewhat poorly drained
Depth to seasonal water saturation: From 1.0 to 1.5 feet
Water table kind: Apparent
Flooding hazard: Rare
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Loamy alluvium

Use and Management Considerations

Cropland
Suitability: Moderately suited
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pasture
Suitability: Moderately suited
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

Woodland
Suitability: Moderately suited to sweetgum
- The low soil strength interferes with the construction of haul roads and log landings.
- Soil wetness may limit the use of the soil by log trucks.
- The low soil strength may create unsafe conditions for log trucks.

Building sites
- Flooding makes this soil unsuited to building site development.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

- The moderate permeability limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.

Interpretative Groups

Land capability class: 2w
Hydric soil: No
Prime farmland: Prime farmland if drained

McA—McColl loam, 0 to 1 percent slopes, ponded

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Carolina bays
Elevation: 82 to 328 feet

Map Unit Composition

McColl, ponded, and similar soils: Typically 80 percent
McColl, drained, and similar soils: Typically 10 percent

Typical Profile

Surface layer:
0 to 9 inches; loam

Subsoil layer:
9 to 13 inches; clay
13 to 42 inches; sandy clay loam
42 to 80 inches; sandy clay loam

Soil Properties and Qualities

Available water capacity: Low (about 3.2 inches)
Slowest saturated hydraulic conductivity: Moderately low (about 0.06 in/hr)
Depth class: Very deep
Depth to root restrictive feature: 15 to 40 inches to fragipan
Agricultural drainage class: Poorly drained
Depth to seasonal water saturation: At the surface
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: McColl, ponded—frequent; McColl, drained—none
Depth of ponding: McColl, ponded—0.0 to 1.0 foot
Shrink-swell potential: Low
Runoff class: McColl, ponded—negligible; McColl, drained—very high
Surface fragments: None
Parent material: Clayey marine deposits

Use and Management Considerations

Cropland
Suitability: Unsuited to cropland in undrained areas

Pasture
Suitability: Poorly suited to pasture in undrained areas

- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.
- The dense soil layer may restrict the rooting depth of plants.

Woodland
Suitability: Moderately suited to sweetgum; poorly suited to baldcypress
- The low soil strength interferes with the construction of haul roads and log landings.
- Ponding restricts the safe use of roads by log trucks.
- The low soil strength may create unsafe conditions for log trucks.

Building sites
- Ponding makes this soil unsuited to building site development.
- The dense nature of the subsurface layer increases the difficulty of digging and compacting the soil material in shallow excavations.

Septic tank absorption fields
- Ponding makes this soil unsuited to septic tank absorption fields.

Local roads and streets
- Ponding affects the ease of excavation and grading and limits the bearing capacity of the soil.
- The limited depth to a fragipan affects the ease of excavation and grading.

Interpretative Groups

Land capability class: McColl, ponded—6w; McColl, drained—3w
Hydric soil: Yes
Prime farmland: Not prime farmland

MxA—Maxton loamy sand, 0 to 2 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Low stream terraces
Elevation: 82 to 328 feet

Map Unit Composition

Maxton and similar soils: Typically 90 percent

Typical Profile

Surface layer:
0 to 8 inches; loamy sand

Subsurface layer:
8 to 12 inches; loamy sand

Subsoil layer:
12 to 33 inches; sandy clay loam

Underlying material:
33 to 80 inches; sand

Soil Properties and Qualities

Available water capacity: Low (about 3.8 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep
Depth to root restrictive feature: 20 to 40 inches to strongly contrasting textural stratification

Agricultural drainage class: Well drained
Depth to seasonal water saturation: More than 6.0 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Loamy alluvium over sandy alluvium

Use and Management Considerations

Cropland
Suitability: Well suited to cotton lint and soybeans; moderately suited to corn and wheat
- The limited available water capacity may cause plants to suffer from moisture stress.

Pasture
Suitability: Well suited
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland
Suitability: Well suited to loblolly pine; poorly suited to southern red oak, yellow-poplar, and sweetgum
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields
- The excessive permeability limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets
- This soil is well suited to local roads and streets.

Interpretative Groups

Land capability class: 1
Hydric soil: No
Prime farmland: Prime farmland in all areas

NcA—Noboco loamy sand, 0 to 2 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Flats and broad interstream divides
Elevation: 82 to 328 feet

Map Unit Composition

Noboco and similar soils: Typically 90 percent

Typical Profile

Surface layer:
0 to 10 inches; loamy sand

Subsurface layer:
10 to 13 inches; loamy sand

Subsoil layer:
13 to 80 inches; sandy clay loam

Soil Properties and Qualities

Available water capacity: Moderate (about 7.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Well drained
Depth to seasonal water saturation: From 2.5 to 3.5 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to cotton lint, soybeans, peanuts, and wheat; moderately suited to corn
- Excessive permeability increases the risk of groundwater contamination.

Pasture
Suitability: Well suited to pasture

Woodland
Suitability: Well suited to loblolly pine; poorly suited to southern red oak and sweetgum
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- This soil is well suited to local roads and streets.

Interpretative Groups

Land capability class: 1

Hydric soil: No
Prime farmland: Prime farmland in all areas

NcB—Noboco loamy sand, 2 to 6 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Ridges and broad interstream divides
Elevation: 82 to 328 feet

Map Unit Composition

Noboco and similar soils: Typically 90 percent

Typical Profile

Surface layer:
0 to 10 inches; loamy sand

Subsurface layer:
10 to 13 inches; loamy sand

Subsoil layer:
13 to 80 inches; sandy clay loam

Soil Properties and Qualities

Available water capacity: Moderate (about 7.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Well drained
Depth to seasonal water saturation: From 2.5 to 3.5 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to cotton lint, soybeans, peanuts, and wheat; moderately suited to corn
- Slope increases surface runoff, erosion hazard, and nutrient loss.
- Excessive permeability increases the risk of groundwater contamination.

Pasture
Suitability: Well suited
- Slope increases erosion hazard, surface runoff, and nutrient loss.

Woodland
Suitability: Well suited to loblolly pine; poorly suited to southern red oak and sweetgum
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.

- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- This soil is well suited to local roads and streets.

Interpretative Groups

Land capability class: 2e
Hydric soil: No
Prime farmland: Prime farmland in all areas

NoA—Norfolk loamy sand, 0 to 2 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Flats and broad interstream divides
Elevation: 82 to 328 feet

Map Unit Composition

Norfolk and similar soils: Typically 85 percent

Typical Profile

Surface layer:
0 to 9 inches; loamy sand

Subsurface layer:
9 to 14 inches; loamy sand

Subsoil layer:
14 to 70 inches; sandy clay loam

Underlying material:
70 to 100 inches; sandy clay loam

Soil Properties and Qualities

Available water capacity: Moderate (about 7.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Well drained
Depth to seasonal water saturation: From 4.0 to 6.6 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None

Parent material: Loamy marine deposits
Hydric inclusions: Rains soil

Use and Management Considerations

Cropland
Suitability: Well suited to corn, cotton lint, soybeans, peanuts, and wheat

Pasture
Suitability: Well suited to pasture

Woodland
Suitability: Moderately suited to loblolly pine; poorly suited to southern red oak and yellow-poplar
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields
- This soil is moderately suited to septic tank absorption fields because of wetness.

Local roads and streets
- This soil is well suited to local roads and streets.

Interpretative Groups

Land capability class: 1
Hydric soil: No
Prime farmland: Prime farmland in all areas

NoB—Norfolk loamy sand, 2 to 6 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Flats and broad interstream divides
Elevation: 82 to 328 feet

Map Unit Composition

Norfolk and similar soils: Typically 85 percent

Typical Profile

Surface layer:
0 to 9 inches; loamy sand

Subsurface layer:
9 to 14 inches; loamy sand

Subsoil layer:
14 to 70 inches; sandy clay loam

Underlying material:
70 to 100 inches; sandy clay loam

Soil Properties and Qualities

Available water capacity: Moderate (about 7.6 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Well drained
Depth to seasonal water saturation: From 4.0 to 6.6 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Loamy marine deposits
Hydric inclusions: Bibb and Johnston soils

Use and Management Considerations

Cropland
Suitability: Well suited to cotton lint, soybeans, peanuts, and wheat; moderately suited to corn
- Slope increases surface runoff, erosion hazard, and nutrient loss.

Pasture
Suitability: Well suited
- Slope increases erosion hazard, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine; poorly suited to southern red oak and yellow-poplar
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields
- This soil is moderately suited to septic tank absorption fields because of wetness.

Local roads and streets
- This soil is well suited to local roads and streets.

Interpretative Groups

Land capability class: 2e
Hydric soil: No
Prime farmland: Prime farmland in all areas

OcA—Ocilla loamy sand, 0 to 2 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Stream terraces
Elevation: 82 to 328 feet

Map Unit Composition

Ocilla and similar soils: Typically 85 percent

Typical Profile

Surface layer:
0 to 10 inches; loamy sand
Subsurface layer:
10 to 28 inches; loamy sand

Subsoil layer:
28 to 46 inches; sandy clay loam
46 to 80 inches; sandy clay loam

Soil Properties and Qualities

Available water capacity: Low (about 5.5 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Somewhat poorly drained
Depth to seasonal water saturation: From 1.0 to 2.5 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Loamy and sandy marine deposits
Hydric inclusions: Rains soil

Use and Management Considerations

Cropland
Suitability: Well suited to wheat; moderately suited to cotton lint, soybeans, and peanuts; poorly suited to corn
- Sandy or coarse-textured layers accelerate the rate at which plant nutrients are leached.
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pasture
Suitability: Well suited
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

Woodland
Suitability: Well suited to loblolly pine
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.
- Soil wetness may limit the use of the soil by log trucks.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.

- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The excessive permeability limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.

Interpretative Groups

Land capability class: 3w
Hydric soil: No
Prime farmland: Not prime farmland

OsA—Osier loamy sand, 0 to 2 percent slopes, rarely flooded

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Depressions, drainageways, and flats
Elevation: 82 to 328 feet

Map Unit Composition

Osier and similar soils: Typically 85 percent

Typical Profile

Surface layer:
0 to 8 inches; loamy sand

Underlying material:
8 to 48 inches; loamy sand
48 to 80 inches; coarse sand

Soil Properties and Qualities

Available water capacity: Low (about 3.8 inches)
Slowest saturated hydraulic conductivity: High (about 5.95 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Poorly drained
Depth to seasonal water saturation: From 0.0 to 1.0 foot
Water table kind: Apparent
Flooding hazard: Rare
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Sandy alluvium

Use and Management Considerations

Cropland
Suitability: Unsuited to cropland
- Excessive permeability increases the risk of groundwater contamination.

Pasture
Suitability: Poorly suited
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

Woodland
Suitability: Well suited to loblolly pine
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.
- Soil wetness may limit the use of the soil by log trucks.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- Flooding makes this soil unsuited to building site development.

Septic tank absorption fields
- The seasonal high water table makes this soil unsuited to conventional septic tank absorption fields.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.

Interpretative Groups

Land capability class: 5w
Hydric soil: Yes
Prime farmland: Not prime farmland

PaA—Pactolus loamy sand, 0 to 2 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Ridges on stream terraces
Elevation: 82 to 328 feet

Map Unit Composition

Pactolus and similar soils: Typically 90 percent

Typical Profile

Surface layer:
0 to 8 inches; loamy sand

Underlying material:
8 to 40 inches; loamy sand
40 to 80 inches; loamy sand

Soil Properties and Qualities

Available water capacity: Low (about 4.2 inches)
Slowest saturated hydraulic conductivity: High (about 5.95 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Moderately well drained
Depth to seasonal water saturation: From 1.5 to 3.0 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very low
Surface fragments: None
Parent material: Sandy fluviomarine deposits and eolian sands
Hydric inclusions: Lumbee soil

Use and Management Considerations

Cropland
Suitability: Moderately suited to cotton lint, peanuts, and wheat; poorly suited to corn and soybeans
- The limited available water capacity may cause plants to suffer from moisture stress.
- Excessive permeability increases the risk of groundwater contamination.
- Sandy or coarse-textured layers accelerate the rate at which plant nutrients are leached.

Pasture
Suitability: Well suited
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland
Suitability: Well suited to loblolly pine; poorly suited to sweetgum
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The excessive permeability limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.

Interpretative Groups

Land capability class: 3s
Hydric soil: No
Prime farmland: Not prime farmland

PcA—Pamlico and Johnston soils, 0 to 1 percent slopes, frequently flooded

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Flood plains
Elevation: 82 to 328 feet

Map Unit Composition

Pamlico and similar soils: Typically 60 percent
Johnston and similar soils: Typically 30 percent

Typical Profile

Pamlico
Surface layer:
0 to 30 inches; muck

Underlying material:
30 to 80 inches; loamy sand

Johnston
Surface layer:
0 to 30 inches; mucky loam
Underlying material:
30 to 34 inches; loamy fine sand
34 to 80 inches; fine sandy loam

Soil Properties and Qualities

Available water capacity: Pamlico—very high (about 14.1 inches); Johnston—high (about 9.4 inches)
Slowest saturated hydraulic conductivity: Pamlico—high (about 5.95 in/hr); Johnston—high (about 1.98 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Very poorly drained
Depth to seasonal water saturation: At the surface
Water table kind: Apparent
Flooding hazard: Frequent
Ponding hazard: Frequent
Depth of ponding: Pamlico—0.0 to 3.0 feet; Johnston—0.0 to 1.0 foot
Shrink-swell potential: Low
Runoff class: Negligible
Surface fragments: None
Parent material: Pamlico—organic material over sandy alluvium; Johnston—sandy and loamy alluvium

Use and Management Considerations

Cropland
Suitability: Unsuited to cropland
- Excessive permeability increases the risk of groundwater contamination.

Pasture
Suitability: Unsuited to pasture

Woodland
Suitability: Poorly suited to baldcypress
- Flooding may result in damage to haul roads.
- The low soil strength interferes with the construction of haul roads and log landings.
- Flooding and ponding restrict the safe use of roads by log trucks.
- Soil wetness may limit the use of these soils by log trucks.
- The low soil strength may create unsafe conditions for log trucks.

Building sites
- Flooding and ponding make these soils unsuited to building site development.
- Subsidence makes these soils unsuited to building site development.

Septic tank absorption fields
- Flooding and ponding make these soils unsuited to septic tank absorption fields.

Local roads and streets
- Flooding may damage local roads and streets.
- Ponding affects the ease of excavation and grading and limits the bearing capacity of these soils.
- Subsidence of the organic material reduces the bearing capacity of these soils.

Interpretative Groups

Land capability class: 7w
Hydric soil: Yes
Prime farmland: Not prime farmland

PnA—Pantego loam, 0 to 2 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Flats and broad interstream divides
Elevation: 82 to 328 feet

Map Unit Composition

Pantego, drained, and similar soils: Typically 80 percent
Pantego, undrained, and similar soils: Typically 10 percent

Typical Profile

Pantego, drained
Surface layer:
0 to 10 inches; loam
10 to 18 inches; loam

Subsoil layer:
18 to 27 inches; sandy clay loam
27 to 80 inches; sandy clay loam

Pantego, undrained
Surface layer:
0 to 18 inches; loam

Subsoil layer:
18 to 27 inches; sandy clay loam
27 to 80 inches; sandy clay loam

Soil Properties and Qualities

Available water capacity: High (about 10.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Very poorly drained
Depth to seasonal water saturation: From 0.0 to 1.0 foot
Water table kind: Apparent
Flooding hazard: Rare
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to cotton lint, soybeans, peanuts, and wheat; moderately suited to corn
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pasture
Suitability: Well suited to pasture in drained areas
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

Woodland
Suitability: Well suited to woodland in drained areas
- The low soil strength interferes with the construction of haul roads and log landings.
- Soil wetness may limit the use of the soil by log trucks.
- The low soil strength may create unsafe conditions for log trucks.

Building sites
- Flooding makes this soil unsuited to building site development.

Septic tank absorption fields
- The seasonal high water table makes this soil unsuited to conventional septic tank absorption fields.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- The low soil strength may cause structural damage to local roads and streets.

Interpretative Groups

Land capability class: Pantego, drained—3w; Pantego, undrained—6w
Hydric soil: Yes
Prime farmland: Prime farmland if drained

PoA—Pelion loamy sand, 0 to 2 percent slopes

Setting

Major Land Resource Area: Carolina and Georgia Sand Hills
Landform: Uplands
Elevation: 164 to 656 feet

Map Unit Composition

Pelion and similar soils: Typically 90 percent

Typical Profile

Surface layer:
0 to 5 inches; loamy sand

Subsurface layer:
5 to 10 inches; loamy sand

Subsoil layer:
10 to 22 inches; sandy clay loam
22 to 39 inches; sandy clay
39 to 80 inches; sandy loam

Soil Properties and Qualities

Available water capacity: Very low (about 2.2 inches)
Slowest saturated hydraulic conductivity: Low (about 0.00 in/hr)
Depth class: Very deep
Depth to root restrictive feature: 15 to 60 inches to fragipan
Agricultural drainage class: Moderately well drained
Depth to seasonal water saturation: From 1.0 to 2.5 feet
Water table kind: Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Loamy marine deposits
Hydric inclusions: Bibb and Johnston soils

Use and Management Considerations

Cropland
Suitability: Well suited to cotton lint; moderately suited to corn, soybeans, and wheat
- The limited available water capacity may cause plants to suffer from moisture stress.

Pasture
Suitability: Well suited
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland
Suitability: Moderately suited to loblolly pine
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The limited depth to a fragipan affects the ease of excavation and grading.
- The low soil strength may cause structural damage to local roads and streets.

Interpretative Groups

Land capability class: 2w
Hydric soil: No
Prime farmland: Prime farmland in all areas

PoB—Pelion loamy sand, 2 to 6 percent slopes

Setting

Major Land Resource Area: Carolina and Georgia Sand Hills
Landform: Uplands
Elevation: 164 to 656 feet

Map Unit Composition

Pelion and similar soils: Typically 90 percent

Typical Profile

Surface layer:
0 to 5 inches; loamy sand

Subsurface layer:
5 to 10 inches; loamy sand

Subsoil layer:
10 to 22 inches; sandy clay loam
22 to 39 inches; sandy clay
39 to 80 inches; sandy loam

Soil Properties and Qualities

Available water capacity: Very low (about 2.2 inches)
Slowest saturated hydraulic conductivity: Low (about 0.00 in/hr)
Depth class: Very deep
Depth to root restrictive feature: 15 to 60 inches to fragipan
Agricultural drainage class: Moderately well drained
Depth to seasonal water saturation: From 1.0 to 2.5 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to cotton lint; moderately suited to corn, soybeans, and wheat
- Slope increases surface runoff, erosion hazard, and nutrient loss.
- The limited available water capacity may cause plants to suffer from moisture stress.

Pasture
Suitability: Well suited
- Slope increases erosion hazard, surface runoff, and nutrient loss.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland
Suitability: Moderately suited to loblolly pine
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The limited depth to a fragipan affects the ease of excavation and grading.
- The low soil strength may cause structural damage to local roads and streets.

Interpretative Groups

Land capability class: 2e
Hydric soil: No
Prime farmland: Not prime farmland

PoC—Pelion loamy sand, 6 to 10 percent slopes

Setting

Major Land Resource Area: Carolina and Georgia Sand Hills
Landform: Uplands
Elevation: 164 to 656 feet

Map Unit Composition

Pelion and similar soils: Typically 90 percent

Typical Profile

Surface layer:
0 to 5 inches; loamy sand

Subsurface layer:
5 to 10 inches; loamy sand

Subsoil layer:
10 to 22 inches; sandy clay loam
22 to 39 inches; sandy clay
39 to 80 inches; sandy loam

Soil Properties and Qualities

Available water capacity: Very low (about 2.2 inches)
Slowest saturated hydraulic conductivity: Low (about 0.00 in/hr)
Depth class: Very deep
Depth to root restrictive feature: 15 to 60 inches to fragipan
Agricultural drainage class: Moderately well drained
Depth to seasonal water saturation: From 1.0 to 2.5 feet
Water table kind: Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to cotton lint; moderately suited to corn, soybeans, and wheat
- Slope increases surface runoff, erosion hazard, and nutrient loss.
- The limited available water capacity may cause plants to suffer from moisture stress.
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pasture
Suitability: Well suited
- Slope increases erosion hazard, surface runoff, and nutrient loss.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland
Suitability: Moderately suited to loblolly pine
- Soil wetness may limit the use of the soil by log trucks.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- The limited depth to a fragipan affects the ease of excavation and grading.
- The low soil strength may cause structural damage to local roads and streets.
- Designing local roads and streets is difficult because of the slope.

Interpretative Groups

Land capability class: 4e
Hydric soil: No
Prime farmland: Not prime farmland

PoD—Pelion loamy sand, 10 to 15 percent slopes

Setting

Major Land Resource Area: Carolina and Georgia Sand Hills
Landform: Uplands
Elevation: 164 to 656 feet

Map Unit Composition

Pelion and similar soils: Typically 90 percent

Typical Profile

Surface layer:
0 to 5 inches; loamy sand

Subsurface layer:
5 to 10 inches; loamy sand

Subsoil layer:
10 to 22 inches; sandy clay loam
22 to 39 inches; sandy clay
39 to 80 inches; sandy loam

Soil Properties and Qualities

Available water capacity: Very low (about 2.2 inches)
Slowest saturated hydraulic conductivity: Low (about 0.00 in/hr)
Depth class: Very deep
Depth to root restrictive feature: 15 to 60 inches to fragipan
Agricultural drainage class: Moderately well drained
Depth to seasonal water saturation: From 1.0 to 2.5 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Unsuited to cropland

Pasture
Suitability: Moderately suited

- Slope increases erosion hazard, surface runoff, and nutrient loss.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland
Suitability: Moderately suited to loblolly pine
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets
- The limited depth to a fragipan affects the ease of excavation and grading.
- The low soil strength may cause structural damage to local roads and streets.
- Designing local roads and streets is difficult because of the slope.

Interpretative Groups

Land capability class: 6e
Hydric soil: No
Prime farmland: Not prime farmland

PuA—Plummer and Osier soils, 0 to 2 percent slopes

Setting

Major Land Resource Area: Carolina and Georgia Sand Hills
Landform: Depressions, drainageways, and flats
Elevation: 82 to 328 feet

Map Unit Composition

Plummer and similar soils: Typically 40 percent
Osier and similar soils: Typically 30 percent

Typical Profile

Plummer
Surface layer:
0 to 9 inches; loamy sand

Subsurface layer:
9 to 50 inches; loamy sand

Subsoil layer:
50 to 80 inches; sandy loam

Osier
Surface layer:
0 to 8 inches; loamy sand

Underlying material:
8 to 48 inches; loamy sand
48 to 80 inches; coarse sand

Soil Properties and Qualities

Available water capacity: Plummer—low (about 4.6 inches); Osier—low (about 3.8 inches)
Slowest saturated hydraulic conductivity: Plummer—moderately high (about 0.20 in/hr); Osier—high (about 5.95 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Poorly drained
Depth to seasonal water saturation: From 0.0 to 1.0 foot
Water table kind: Apparent
Flooding hazard: Plummer—none; Osier—frequent
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Plummer—loamy and sandy marine deposits; Osier—sandy fluviomarine deposits

Use and Management Considerations

Cropland
Suitability: Unsuited
- Excessive permeability increases the risk of groundwater contamination.
- Frequent flooding restricts the use of winter grain crops.
- Flooding may damage crops.
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pasture
Suitability: Poorly suited
- Flooding may damage pastures.
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

Woodland
Suitability: Well suited to loblolly pine
- Flooding may result in damage to haul roads.
- Coarse-textured layers in the soils increase the need for maintenance of haul roads and log landings.
- Flooding restricts the safe use of roads by log trucks.
- Soil wetness may limit the use of the soils by log trucks.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soils may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- Flooding makes these soils unsuited to building site development.

Septic tank absorption fields
- Flooding makes these soils unsuited to septic tank absorption fields.
- The seasonal high water table makes these soils unsuited to conventional septic tank absorption fields.

Local roads and streets
- Flooding may damage local roads and streets.
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soils.

Interpretative Groups

Land capability class: Plummer—4w; Osier—5w
Hydric soil: Yes
Prime farmland: Not prime farmland

PxA—Paxville loam, 0 to 1 percent slopes, rarely flooded

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Broad interstream divides, Carolina bays, and flats
Elevation: 82 to 328 feet

Map Unit Composition

Paxville, ponded, and similar soils: Typically 80 percent
Paxville, drained, and similar soils: Typically 10 percent

Typical Profile

Surface layer:
0 to 15 inches; loam

Subsoil layer:
15 to 40 inches; sandy clay loam
40 to 48 inches; sandy loam

Underlying material:
48 to 99 inches; sand

Soil Properties and Qualities

Available water capacity: Moderate (about 7.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Very poorly drained
Depth to seasonal water saturation: At the surface
Water table kind: Apparent
Flooding hazard: Rare
Ponding hazard: Paxville, ponded—frequent; Paxville, drained—none
Depth of ponding: Paxville, ponded—0.0 to 1.0 foot
Shrink-swell potential: Low
Runoff class: Paxville, ponded—negligible; Paxville, drained—very high

Surface fragments: None
Parent material: Loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Unsuited to cropland
- Excessive permeability increases the risk of groundwater contamination.

Pasture
Suitability: Moderately suited
- Flooding may damage pastures.
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

Woodland
Suitability: Moderately suited to sweetgum; poorly suited to baldcypress
- Flooding may result in damage to haul roads.
- Flooding and ponding restrict the safe use of roads by log trucks.
- Soil wetness may limit the use of the soil by log trucks.

Building sites
- Flooding and ponding make this soil unsuited to building site development.

Septic tank absorption fields
- Flooding and ponding make this soil unsuited to septic tank absorption fields.

Local roads and streets
- Flooding may damage local roads and streets.
- Ponding affects the ease of excavation and grading and limits the bearing capacity of the soil.

Interpretative Groups

Land capability class: Paxville, ponded—6w; Paxville, drained—3w
Hydric soil: Yes
Prime farmland: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

RaA—Rains fine sandy loam, 0 to 2 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Broad interstream divides, Carolina bays, and flats
Elevation: 82 to 328 feet

Map Unit Composition

Rains, drained, and similar soils: Typically 80 percent
Rains, undrained, and similar soils: Typically 10 percent

Typical Profile

Surface layer:
0 to 7 inches; fine sandy loam

Subsurface layer:
7 to 12 inches; fine sandy loam

Subsoil layer:
12 to 20 inches; sandy loam
20 to 62 inches; sandy clay loam
62 to 85 inches; sandy clay loam

Soil Properties and Qualities

Available water capacity: High (about 9.4 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Poorly drained
Depth to seasonal water saturation: From 0.0 to 1.0 foot
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to cotton lint and soybeans; moderately suited to corn, peanuts, and wheat
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pasture
Suitability: Well suited
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

Woodland
Suitability: Well suited
- This soil is well suited to roads and landings.
- Soil wetness may limit the use of the soil by log trucks.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- The low soil strength may cause structural damage to local roads and streets.

Interpretative Groups

Land capability class: Rains, drained—3w; Rains, undrained—4w
Hydric soil: Yes
Prime farmland: Prime farmland if drained

RuA—Rutlege loamy sand, 0 to 2 percent slopes, rarely flooded

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Flats, depressions, and floodplains
Elevation: 82 to 328 feet

Map Unit Composition

Rutlege, undrained, and similar soils: Typically 80 percent
Rutlege, drained, and similar soils: Typically 10 percent

Typical Profile

Surface layer:
0 to 15 inches; loamy sand

Underlying material:
15 to 80 inches; sand

Soil Properties and Qualities

Available water capacity: Low (about 4.6 inches)
Slowest saturated hydraulic conductivity: High (about 5.95 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Very poorly drained
Depth to seasonal water saturation: From 0.0 to 0.5 foot
Water table kind: Apparent
Flooding hazard: Rare
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Sandy fluviomarine deposits and eolian sands

Use and Management Considerations

Cropland
Suitability: Unsuited to cropland
- Excessive permeability increases the risk of groundwater contamination.

Pasture
Suitability: Poorly suited
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.

Woodland
Suitability: Well suited to loblolly pine and baldcypress; moderately suited to sweetgum
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.
- Soil wetness may limit the use of the soil by log trucks.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- Flooding makes this soil unsuited to building site development.

Septic tank absorption fields
- The seasonal high water table makes this soil unsuited to conventional septic tank absorption fields.

Local roads and streets
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.

Interpretative Groups

Land capability class: Rutlege, undrained—5w; Rutlege, drained—4w
Hydric soil: Yes
Prime farmland: Not prime farmland

ThA—Thursa loamy sand, 0 to 2 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Flats and broad interstream divides
Elevation: 82 to 328 feet

Map Unit Composition

Thursa and similar soils: Typically 80 percent 68 to 92 percent

Typical Profile

Surface layer:
0 to 10 inches; loamy sand

Subsoil layer:
10 to 35 inches; sandy clay loam
35 to 50 inches; sandy clay
50 to 80 inches; clay

Soil Properties and Qualities

Available water capacity: Moderate (about 6.8 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Well drained
Depth to seasonal water saturation: More than 6.0 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to cotton lint, soybeans, and wheat; moderately suited to corn and peanuts
- The high clay content restricts the rooting depth of crops.

- Soil crusting decreases water infiltration and interferes with the emergence of seedlings.

Pasture
Suitability: Well suited to pasture

Woodland
Suitability: Well suited to loblolly pine
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields
- This soil is well suited to septic tank absorption fields.

Local roads and streets
- This soil is well suited to local roads and streets.

Interpretative Groups

Land capability class: 1
Hydric soil: No
Prime farmland: Prime farmland in all areas

ThB—Thursa loamy sand, 2 to 6 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Ridges and broad interstream divides
Elevation: 82 to 328 feet

Map Unit Composition

Thursa and similar soils: Typically 75 percent

Typical Profile

Surface layer:
0 to 10 inches; loamy sand

Subsoil layer:
10 to 35 inches; sandy clay loam
35 to 50 inches; sandy clay
50 to 80 inches; clay

Soil Properties and Qualities

Available water capacity: Moderate (about 6.8 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches

Agricultural drainage class: Well drained
Depth to seasonal water saturation: More than 6.0 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Loamy marine deposits

Use and Management Considerations

Cropland
Suitability: Well suited to cotton lint, soybeans, and wheat; moderately suited to corn and peanuts
- Slope increases surface runoff, erosion hazard, and nutrient loss.
- The high clay content restricts the rooting depth of crops.
- Soil crusting decreases water infiltration and interferes with the emergence of seedlings.

Pasture
Suitability: Well suited
- Slope increases erosion hazard, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields
- This soil is well suited to septic tank absorption fields.

Local roads and streets
- This soil is well suited to local roads and streets.

Interpretative Groups

Land capability class: 2e
Hydric soil: No
Prime farmland: Prime farmland in all areas

UcC—Uchee loamy sand, 6 to 12 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Ridges and broad interstream divides
Elevation: 82 to 328 feet

Map Unit Composition

Uchee and similar soils: Typically 80 percent

Typical Profile

Surface layer:
0 to 6 inches; loamy sand

Subsurface layer:
6 to 26 inches; loamy sand

Subsoil layer:
26 to 47 inches; sandy clay loam

Underlying material:
47 to 80 inches; sandy clay loam

Soil Properties and Qualities

Available water capacity: Moderate (about 6.5 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Well drained
Depth to seasonal water saturation: From 3.5 to 5.0 feet
Water table kind: Perched
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Medium
Surface fragments: None
Parent material: Loamy and sandy marine deposits

Use and Management Considerations

Cropland
Suitability: Moderately suited to cotton lint; poorly suited to corn, soybeans, peanuts, and wheat
- Slope increases surface runoff, erosion hazard, and nutrient loss.
- Sandy or coarse-textured layers accelerate the rate at which plant nutrients are leached.

Pasture
Suitability: Well suited
- Slope increases erosion hazard, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The slope influences the use of machinery and the amount of excavation required.

- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The excessive permeability limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets
- Designing local roads and streets is difficult because of the slope.

Interpretative Groups

Land capability class: 3e
Hydric soil: No
Prime farmland: Not prime farmland

Ud—Udorthents, borrow pits

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Borrow pits and leveled land
Elevation: 164 to 656 feet

Map Unit Composition

Udorthents and similar soils: Typically 100 percent

Typical Profile

Borrow pits are areas where all the original soils and much of the underlying layers have been removed for use as fill material or construction aggregate. Cuts are 3 to 25 feet deep and have steep side slopes on one or more sides. The surface is generally uneven and many areas have exposed bedrock. Plant growth in these areas generally is poor. Most of the areas are naturally reseeded in wild grasses, weeds, shortleaf pine, and Virginia pine. Erosion is a severe hazard in unstabilized areas. Major reclamation generally is necessary to prepare these areas for the economic production of plants or development for other purposes.

Use and Management Considerations

- Onsite investigation is needed to determine the suitability of areas of this map unit for specific uses.

Interpretative Groups

Land capability class: Not rated
Hydric soil: No
Prime farmland: Not prime farmland

VaB—Vaucluse loamy sand, 2 to 8 percent slopes

Setting

Major Land Resource Area: Carolina and Georgia Sand Hills
Landform: Low hills
Elevation: 164 to 656 feet

Map Unit Composition

Vaucluse and similar soils: Typically 80 percent

Typical Profile

Surface layer:
0 to 6 inches; loamy sand

Subsurface layer:
6 to 15 inches; loamy sand

Subsoil layer:
15 to 29 inches; sandy clay loam
29 to 58 inches; sandy clay loam
58 to 80 inches; sandy loam

Soil Properties and Qualities

Available water capacity: Very low (about 2.7 inches)
Slowest saturated hydraulic conductivity: Moderately low (about 0.06 in/hr)
Depth class: Very deep
Depth to root restrictive feature: 15 to 35 inches to fragipan
Agricultural drainage class: Well drained
Depth to seasonal water saturation: More than 6.0 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Loamy and sandy marine deposits
Hydric inclusions: Bibb and Johnston soils

Use and Management Considerations

Cropland
Suitability: Moderately suited to cotton lint; moderately suited to wheat; poorly suited to corn and soybeans
- Slope increases surface runoff, erosion hazard, and nutrient loss.
- The dense soil material restricts the rooting depth of crops.
- The limited available water capacity may cause plants to suffer from moisture stress.
- Soil crusting decreases water infiltration and interferes with the emergence of seedlings.

Pasture
Suitability: Well suited
- Slope increases erosion hazard, surface runoff, and nutrient loss.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.
- The dense soil layer may restrict the rooting depth of plants.

Woodland
Suitability: Poorly suited to loblolly pine and southern red oak
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.
- The slope may restrict the use of some mechanical planting equipment.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The dense nature of the subsurface layer increases the difficulty of digging and compacting the soil material in shallow excavations.

Septic tank absorption fields
- The excessive permeability limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.
- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets
- The limited depth to a fragipan affects the ease of excavation and grading.

Interpretative Groups

Land capability class: 3s
Hydric soil: No
Prime farmland: Not prime farmland

VaC—Vaucluse loamy sand, 8 to 15 percent slopes

Setting

Major Land Resource Area: Carolina and Georgia Sand Hills
Landform: Low hills
Elevation: 164 to 656 feet

Map Unit Composition

Vaucluse and similar soils: Typically 80 percent

Typical Profile

Surface layer:
0 to 6 inches; loamy sand

Subsurface layer:
6 to 15 inches; loamy sand

Subsoil layer:
15 to 29 inches; sandy clay loam
29 to 58 inches; sandy clay loam
58 to 80 inches; sandy loam

Soil Properties and Qualities

Available water capacity: Very low (about 2.7 inches)
Slowest saturated hydraulic conductivity: Moderately low (about 0.06 in/hr)
Depth class: Very deep
Depth to root restrictive feature: 15 to 35 inches to fragipan
Agricultural drainage class: Well drained
Depth to seasonal water saturation: More than 6.0 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Loamy and sandy marine deposits
Hydric inclusions: Bibb and Johnston soils

Use and Management Considerations

Cropland
Suitability: Moderately suited to cotton lint and wheat; poorly suited to corn and soybeans
- Slope increases surface runoff, erosion hazard, and nutrient loss.
- The dense soil material restricts the rooting depth of crops.
- The limited available water capacity may cause plants to suffer from moisture stress.
- Soil crusting decreases water infiltration and interferes with the emergence of seedlings.

Pasture
Suitability: Well suited
- Slope increases erosion hazard, surface runoff, and nutrient loss.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.
- The dense soil layer may restrict the rooting depth of plants.

Woodland
Suitability: Poorly suited to loblolly pine and southern red oak
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The slope influences the use of machinery and the amount of excavation required.
- The dense nature of the subsurface layer increases the difficulty of digging and compacting the soil material in shallow excavations.

Septic tank absorption fields
- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets
- The limited depth to a fragipan affects the ease of excavation and grading.
- Designing local roads and streets is difficult because of the slope.

Interpretative Groups

Land capability class: 4e
Hydric soil: No
Prime farmland: Not prime farmland

W—Water

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Unspecified

Typical Pedon

This map unit includes ponds, lakes, creeks, and rivers. This map unit is not assigned any interpretive groups.

WaB—Wagram loamy sand, 0 to 6 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Ridges and broad interstream divides
Elevation: 82 to 328 feet

Map Unit Composition

Wagram and similar soils: Typically 80 percent

Typical Profile

Surface layer:
0 to 8 inches; loamy sand

Subsurface layer:
8 to 24 inches; loamy sand

Subsoil layer:
24 to 83 inches; sandy clay loam

Soil Properties and Qualities

Available water capacity: Moderate (about 6.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Well drained
Depth to seasonal water saturation: More than 6.0 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Loamy marine deposits
Hydric inclusions: Bibb and Johnston soils

Use and Management Considerations

Cropland
Suitability: Well suited to cotton lint; moderately suited to peanuts and wheat; poorly suited to corn and soybeans
- Slope increases surface runoff, erosion hazard, and nutrient loss.
- Sandy or coarse-textured layers accelerate the rate at which plant nutrients are leached.

Pasture
Suitability: Well suited
- Slope increases erosion hazard, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine
- Coarse-textured layers in the soil increase the need for maintenance of haul roads and log landings.

- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields
- The excessive permeability limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets
- This soil is well suited to local road and streets.

Interpretative Groups

Land capability class: 2s
Hydric soil: No
Prime farmland: Not prime farmland

WcB—Wakulla and Candor soils, 0 to 8 percent slopes

Setting

Major Land Resource Area: Carolina and Georgia Sand Hills
Landform: Low hills
Elevation: 164 to 656 feet

Map Unit Composition

Wakulla and similar soils: Typically 45 percent
Candor and similar soils: Typically 40 percent

Typical Profile

Wakulla
Surface layer:
0 to 7 inches; sand

Subsurface layer:
7 to 24 inches; sand

Subsoil layer:
24 to 42 inches; loamy sand

Underlying material:
42 to 85 inches; sand

Candor
Surface layer:
0 to 8 inches; sand

Subsurface layer:
8 to 26 inches; sand

Subsoil layer:
26 to 38 inches; loamy sand
38 to 62 inches; sand
62 to 80 inches; sandy clay loam

Soil Properties and Qualities

Available water capacity: Wakulla—very low (about 2.7 inches); Candor—very low (about 2.9 inches)
Slowest saturated hydraulic conductivity: Wakulla—high (about 5.95 in/hr); Candor—moderately high (about 0.57 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6.0 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very low
Surface fragments: None
Parent material: Sandy and loamy marine deposits and eolian sands
Hydric inclusions: Bibb and Johnston soils

Use and Management Considerations

Cropland
Suitability: Moderately suited to cotton lint; poorly suited to corn, soybeans, peanuts, and wheat
- Slope increases surface runoff, erosion hazard, and nutrient loss.
- Sandy or coarse-textured layers accelerate the rate at which plant nutrients are leached.
- Soil crusting decreases water infiltration and interferes with the emergence of seedlings.

Pasture
Suitability: Well suited
- Slope increases erosion hazard, surface runoff, and nutrient loss.

Woodland
Suitability: Poorly suited to loblolly pine
- Coarse-textured layers in the soils increase the need for maintenance of haul roads and log landings.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soils may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The high content of sand or gravel in the soils increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields
- The excessive permeability limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets
- These soils are well suited to local roads and streets.

Interpretative Groups

Land capability class: Wakulla—3s; Candor—4s
Hydric soil: No
Prime farmland: Not prime farmland

WkB—Wakulla and Candor soils, moderately wet, 0 to 8 percent slopes

Setting

Major Land Resource Area: Carolina and Georgia Sand Hills
Landform: Low hills
Elevation: 164 to 656 feet

Map Unit Composition

Wakulla and similar soils: Typically 45 percent
Candor and similar soils: Typically 40 percent

Typical Profile

Wakulla
Surface layer:
0 to 7 inches; sand

Subsurface layer:
7 to 24 inches; sand

Subsoil layer:
24 to 42 inches; loamy sand
• Underlying material
42 to 85 inches; sand

Candor
Surface layer:
0 to 8 inches; sand

Subsurface layer:
8 to 26 inches; sand

Subsoil layer:
26 to 38 inches; loamy sand
38 to 62 inches; sand
62 to 80 inches; sandy clay loam

Soil Properties and Qualities

Available water capacity: Wakulla—very low (about 2.7 inches); Candor—very low (about 2.9 inches)
Slowest saturated hydraulic conductivity: Wakulla—high (about 5.95 in/hr); Candor—moderately high (about 0.57 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Somewhat excessively drained
Depth to seasonal water saturation: From 4.0 to 6.0 feet
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very low
Surface fragments: None
Parent material: Sandy and loamy marine deposits and eolian sands

Use and Management Considerations

Cropland
Suitability: Poorly suited to corn and soybeans
- Slope increases surface runoff, erosion hazard, and nutrient loss.
- Sandy or coarse-textured layers accelerate the rate at which plant nutrients are leached.
- Soil crusting decreases water infiltration and interferes with the emergence of seedlings.

Pasture
Suitability: Well suited
- Slope increases erosion hazard, surface runoff, and nutrient loss.

Woodland
Suitability: Moderately suited to loblolly pine
- Coarse-textured layers in the soils increase the need for maintenance of haul roads and log landings.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soils may reduce the traction of wheeled harvest equipment and log trucks.

Building sites
- The seasonal high water table may restrict the period when excavations can be made.
- The high content of sand or gravel in the soils increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The excessive permeability limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.

Local roads and streets
- These soils are well suited to local roads and streets.

Interpretative Groups

Land capability class: 3s
Hydric soil: No
Prime farmland: Not prime farmland

WuB—Wakulla-Rimini complex, 0 to 10 percent slopes

Setting

Major Land Resource Area: Southern Coastal Plain
Landform: Rims of Carolina bays
Elevation: 82 to 328 feet

Map Unit Composition

Wakulla and similar soils: Typically 55 percent
Rimini and similar soils: Typically 40 percent

Typical Profile

Wakulla
Surface layer:
0 to 7 inches; sand

Subsurface layer:
7 to 24 inches; sand

Subsoil layer:
24 to 42 inches; loamy sand

Underlying material:
42 to 85 inches; sand

Rimini
Surface layer:
0 to 4 inches; sand

Subsurface layer:
4 to 58 inches; sand

Subsoil layer:
58 to 80 inches; sand

Underlying material:
80 to 88 inches; sand

Soil Properties and Qualities

Available water capacity: Wakulla—very low (about 2.7 inches); Rimini—very low (about 2.4 inches)
Slowest saturated hydraulic conductivity: High (about 5.95 in/hr)
Depth class: Very deep
Depth to root restrictive feature: More than 60 inches
Agricultural drainage class: Wakulla—somewhat excessively drained; Rimini—excessively drained
Depth to seasonal water saturation: More than 6.0 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Wakulla—low; Rimini—very low
Surface fragments: None
Parent material: Sandy and loamy marine deposits and eolian sands

Use and Management Considerations

Cropland
Suitability: Moderately suited to cotton lint; poorly suited to corn, soybeans, peanuts, and wheat
- Slope increases surface runoff, erosion hazard, and nutrient loss.
- Sandy or coarse-textured layers accelerate the rate at which plant nutrients are leached.
- Soil crusting decreases water infiltration and interferes with the emergence of seedlings.

Pasture
Suitability: Well suited
- Slope increases erosion hazard, surface runoff, and nutrient loss.

Woodland

Suitability: Moderately suited to loblolly pine

- Coarse-textured layers in the soils increase the need for maintenance of haul roads and log landings.
- The slope may restrict the use of some mechanical planting equipment.
- Coarse-textured layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soils may reduce the traction of wheeled harvest equipment and log trucks.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- The high content of sand or gravel in the soils increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields

- The excessive permeability limits the proper treatment of the effluent from conventional septic systems and may pollute the water table.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Designing local roads and streets is difficult because of the slope.

Interpretative Groups

Land capability class: Wakulla—3s; Rimini—6s
Hydric soil: No
Prime farmland: Not prime farmland

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as rangeland and forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; for agricultural waste management; and as wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of gravel, sand, reclamation material, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes. Terms for the limitation classes are *not limited, somewhat limited,* and *very limited*. The suitability ratings are expressed as *well suited, moderately suited, poorly suited,* and *unsuited* or as *good, fair,* and *poor*.

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate

gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Crops and Pasture

General management needed for crops and pasture is suggested in this section. The estimated yields of the main crops and pasture plants are listed, and the system of land capability classification used by the Natural Resources Conservation Service is explained.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under the heading “Detailed Soil Map Units.” Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Yields per Acre

The titles of the tables described in this section are:

- “Nonirrigated Yields by Map Unit Component (Part 1)”
- “Nonirrigated Yields by Map Unit Component (Part 2)”
- “Nonirrigated Yields by Map Unit Component (Part 3)”

The average yields per acre shown in the yields tables in this survey are those that can be expected of the principal crops under a high level of management. In any given year, yields may be higher or lower than those indicated in the tables because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the tables.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

For yields of irrigated crops, it is assumed that the irrigation system is adapted to the soils and to the crops grown, that good-quality irrigation water is uniformly applied as needed, and that tillage is kept to a minimum.

Pasture yields are expressed in terms of animal unit months. An animal unit month (AUM) is the amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in the yields tables are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension

Service can provide information about the management and productivity of the soils for those crops.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes.

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit (USDA, 1961).

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have slight limitations that restrict their use.

Class 2 soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e, w, s,* or *c,* to the class numeral, for example, 2e. The letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c,* used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w, s,* or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, wildlife habitat, or recreation.

Capability units are soil groups within a subclass. The soils in a capability unit are enough alike to be suited to the same crops and pasture plants, to require similar management, and to have similar productivity. Capability units are generally designated by adding an Arabic numeral to the subclass symbol, for example, 2e-4 and 3e-6. These units are not given in all soil surveys.

The capability classification of the soils in this survey area is given in the section "Detailed Soil Map Units" and in the yields tables.

Prime Farmland and Other Important Farmlands

The table "Prime Farmland and Other Important Farmlands" lists the map units in the survey area that are considered prime farmland, unique farmland, and farmland of statewide or local importance. This list does not constitute a recommendation for a particular land use.

In an effort to identify the extent and location of important farmlands, the Natural Resources Conservation Service, in cooperation with other interested Federal, State, and local government organizations, has inventoried land that can be used for the production of the Nation's food supply.

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

A recent trend in land use in some areas has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

For some soils identified in the table as prime farmland, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures.

In some areas, land that does not meet the criteria for prime or unique farmland is considered to be *farmland of statewide importance* for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable. Farmland of statewide importance may include tracts of land that have been designated for agriculture by State law.

In some areas that are not identified as having national or statewide importance, land is considered to be *farmland of local importance* for the production of food, feed, fiber, forage, and oilseed crops. This farmland is identified by the appropriate local

agencies. Farmland of local importance may include tracts of land that have been designated for agriculture by local ordinance.

Agricultural Waste Management

The titles of the tables described in this section are:

- "Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge"
- "Agricultural Disposal of Wastewater by Irrigation and Overland Flow"
- "Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment"

Soil properties are important considerations in areas where soils are used as sites for the treatment and disposal of organic waste and wastewater. Selection of soils with properties that favor waste management can help to prevent environmental damage.

The tables described in this section show the degree and kind of soil limitations affecting the treatment of agricultural waste, including municipal and food-processing wastewater and effluent from lagoons or storage ponds. Municipal wastewater is the waste stream from a municipality. It contains domestic waste and may contain industrial waste. It may have received primary or secondary treatment. It is rarely untreated sewage. Food-processing wastewater results from the preparation of fruits, vegetables, milk, cheese, and meats for public consumption. In places it is high in content of sodium and chloride. In the context of these tables, the effluent in lagoons and storage ponds is from facilities used to treat or store food-processing wastewater or domestic or animal waste. Domestic and food-processing wastewater is very dilute, and the effluent from the facilities that treat or store it commonly is very low in content of carbonaceous and nitrogenous material; the content of nitrogen commonly ranges from 10 to 30 milligrams per liter. The wastewater from animal waste treatment lagoons or storage ponds, however, has much higher concentrations of these materials, mainly because the manure has not been diluted as much as the domestic waste. The content of nitrogen in this wastewater generally ranges from 50 to 2,000 milligrams per liter. When wastewater is applied, checks should be made to ensure that nitrogen, heavy metals, and salts are not added in excessive amounts.

The ratings in the tables are for waste management systems that not only dispose of and treat organic waste or wastewater but also are beneficial to crops (application of manure and food-processing waste, application of sewage sludge, and disposal of wastewater by irrigation) and for waste management systems that are designed only for the purpose of wastewater disposal and treatment (overland flow of wastewater, rapid infiltration of wastewater, and slow rate treatment of wastewater).

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect agricultural waste management. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Application of manure and food-processing waste not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in

the soils where the material is applied. Manure is the excrement of livestock and poultry, and food-processing waste is damaged fruit and vegetables and the peelings, stems, leaves, pits, and soil particles removed in food preparation. The manure and food-processing waste are either solid, slurry, or liquid. Their nitrogen content varies. A high content of nitrogen limits the application rate. Toxic or otherwise dangerous wastes, such as those mixed with the lye used in food processing, are not considered in the ratings.

The ratings are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the waste is applied, and the method by which the waste is applied. The properties that affect absorption include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, and available water capacity. The properties that affect plant growth and microbial activity include reaction, the sodium adsorption ratio, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

Application of sewage sludge not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. In the context of this table, sewage sludge is the residual product of the treatment of municipal sewage. The solid component consists mainly of cell mass, primarily bacteria cells that developed during secondary treatment and have incorporated soluble organics into their own bodies. The sludge has small amounts of sand, silt, and other solid debris. The content of nitrogen varies. Some sludge has constituents that are toxic to plants or hazardous to the food chain, such as heavy metals and exotic organic compounds, and should be analyzed chemically prior to use.

The content of water in the sludge ranges from about 98 percent to less than 40 percent. The sludge is considered liquid if it is more than about 90 percent water, slurry if it is about 50 to 90 percent water, and solid if it is less than about 50 percent water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the sludge is applied, and the method by which the sludge is applied. The properties that affect absorption, plant growth, and microbial activity include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, available water capacity, reaction, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of sludge. Permanently frozen soils are unsuitable for waste treatment.

Disposal of wastewater by irrigation not only disposes of municipal wastewater and wastewater from food-processing plants, lagoons, and storage ponds but also can improve crop production by increasing the amount of water available to crops. The ratings in the table are based on the soil properties that affect the design, construction, management, and performance of the irrigation system. The properties that affect design and management include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, permeability, slope, and flooding. The properties that affect construction include stones, cobbles, depth to bedrock or a cemented pan, depth to a water table, and ponding. The properties that affect performance include depth to bedrock or a cemented pan, bulk density, the sodium adsorption ratio, salinity, reaction, and the cation-exchange capacity, which is used to estimate the capacity of a

soil to adsorb heavy metals. Permanently frozen soils are not suitable for disposal of wastewater by irrigation.

Overland flow of wastewater is a process in which wastewater is applied to the upper reaches of sloped land and allowed to flow across vegetated surfaces, sometimes called terraces, to runoff-collection ditches. The length of the run generally is 150 to 300 feet. The application rate ranges from 2.5 to 16.0 inches per week. It commonly exceeds the rate needed for irrigation of cropland. The wastewater leaves solids and nutrients on the vegetated surfaces as it flows downslope in a thin film. Most of the water reaches the collection ditch, some is lost through evapotranspiration, and a small amount may percolate to the ground water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, and the design and construction of the system. Reaction and the cation-exchange capacity affect absorption. Reaction, salinity, and the sodium adsorption ratio affect plant growth and microbial activity. Slope, permeability, depth to a water table, ponding, flooding, depth to bedrock or a cemented pan, stones, and cobbles affect design and construction. Permanently frozen soils are unsuitable for waste treatment.

Rapid infiltration of wastewater is a process in which wastewater applied in a level basin at a rate of 4 to 120 inches per week percolates through the soil. The wastewater may eventually reach the ground water. The application rate commonly exceeds the rate needed for irrigation of cropland. Vegetation is not a necessary part of the treatment; hence, the basins may or may not be vegetated. The thickness of the soil material needed for proper treatment of the wastewater is more than 72 inches. As a result, geologic and hydrologic investigation is needed to ensure proper design and performance and to determine the risk of ground-water pollution.

The ratings in the table are based on the soil properties that affect the risk of pollution and the design, construction, and performance of the system. Depth to a water table, ponding, flooding, and depth to bedrock or a cemented pan affect the risk of pollution and the design and construction of the system. Slope, stones, and cobbles also affect design and construction. Permeability and reaction affect performance. Permanently frozen soils are unsuitable for waste treatment.

Slow rate treatment of wastewater is a process in which wastewater is applied to land at a rate normally between 0.5 inch and 4.0 inches per week. The application rate commonly exceeds the rate needed for irrigation of cropland. The applied wastewater is treated as it moves through the soil. Much of the treated water may percolate to the ground water, and some enters the atmosphere through evapotranspiration. The applied water generally is not allowed to run off the surface. Waterlogging is prevented either through control of the application rate or through the use of tile drains, or both.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, and the application of waste. The properties that affect absorption include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, permeability, depth to bedrock or a cemented pan, reaction, the cation-exchange capacity, and slope. Reaction, the sodium adsorption ratio, salinity, and bulk density affect plant growth and microbial activity. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood of wind erosion or water erosion. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

Forestland Productivity and Management

The tables described in this section can help forest owners or managers plan the use of soils for wood crops. They show the potential productivity of the soils for wood

crops and rate the soils according to the limitations that affect various aspects of forestland management.

Forestland Productivity

In the table, "Forestland Productivity," the *potential productivity* of merchantable or *common trees* on a soil is expressed as a site index and as a volume number. The *site index* is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that forest managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site index is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet.

The *volume of wood fiber*, a number, is the yield likely to be produced by the most important tree species. This number, expressed as cubic feet per acre per year and calculated at the age of culmination of the mean annual increment (CMAI), indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

Trees to manage are those that are preferred for planting, seeding, or natural regeneration and those that remain in the stand after thinning or partial harvest.

Forestland Management

The titles of the tables described in this section are:

- "Haul Roads, Log Landings, and Soil Rutting on Forestland"
- "Hazard of Erosion and Suitability for Roads on Forestland"
- "Forestland Planting and Harvesting"
- "Forestland Site Preparation"
- "Damage by Fire and Seedling Mortality on Forestland"

In these tables, interpretive ratings are given for various aspects of forestland management. The ratings are both verbal and numerical.

Some rating class terms indicate the degree to which the soils are suited to a specified aspect of forestland management. *Well suited* indicates that the soil has features that are favorable for the specified management aspect and has no limitations. Good performance can be expected, and little or no maintenance is needed. *Moderately suited* indicates that the soil has features that are moderately favorable for the specified management aspect. One or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. *Poorly suited* indicates that the soil has one or more properties that are unfavorable for the specified management aspect. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. *Unsuited* indicates that the expected performance of the soil is unacceptable for the specified management aspect or that extreme measures are needed to overcome the undesirable soil properties.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

Rating class terms for fire damage and seedling mortality are expressed as *low, moderate,* and *high*. Where these terms are used, the numerical ratings indicate gradations between the point at which the potential for fire damage or seedling mortality is highest (1.00) and the point at which the potential is lowest (0.00).

The paragraphs that follow indicate the soil properties considered in rating the soils. More detailed information about the criteria used in the ratings is available in the “National Forestry Manual,” which is available in local offices of the Natural Resources Conservation Service or on the Internet.

For *limitations affecting construction of haul roads and log landings*, the ratings are based on slope, flooding, permafrost, plasticity index, the hazard of soil slippage, content of sand, the Unified classification, rock fragments on or below the surface, depth to a restrictive layer that is indurated, depth to a water table, and ponding. The limitations are described as slight, moderate, or severe. A rating of *slight* indicates that no significant limitations affect construction activities, *moderate* indicates that one or more limitations can cause some difficulty in construction, and *severe* indicates that one or more limitations can make construction very difficult or very costly.

The ratings of *suitability for log landings* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The soils are described as well suited, moderately suited, or poorly suited to use as log landings.

Ratings in the column *soil rutting hazard* are based on depth to a water table, rock fragments on or below the surface, the Unified classification, depth to a restrictive layer, and slope. Ruts form as a result of the operation of forest equipment. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that the soil is subject to little or no rutting, *moderate* indicates that rutting is likely, and *severe* indicates that ruts form readily.

Ratings in the column *hazard of off-road or off-trail erosion* are based on slope and on soil erodibility factor K. The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance. The hazard is described as slight, moderate, severe, or very severe. A rating of *slight* indicates that erosion is unlikely under ordinary climatic conditions; *moderate* indicates that some erosion is likely and that erosion-control measures may be needed; *severe* indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and *very severe* indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Ratings in the column *hazard of erosion on roads and trails* are based on the soil erodibility factor K, slope, and content of rock fragments. The ratings apply to unsurfaced roads and trails. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that little or no erosion is likely; *moderate* indicates that some erosion is likely, that the roads or trails may require occasional maintenance, and that simple erosion-control measures are needed; and *severe* indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed.

Ratings in the column *suitability for roads (natural surface)* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The ratings indicate the suitability for using the natural surface of the soil for roads. The soils are described as well suited, moderately suited, or poorly suited to this use.

Ratings in the columns *suitability for hand planting* and *suitability for mechanical planting* are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, moderately suited, poorly suited, or unsuited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column *suitability for use of harvesting equipment* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified

classification, depth to a water table, and ponding. The soils are described as well suited, moderately suited, or poorly suited to this use.

Ratings in the column *suitability for mechanical site preparation (surface)* are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 1 foot is considered in the ratings.

Ratings in the column *suitability for mechanical site preparation (deep)* are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

Ratings in the column *potential for damage to soil by fire* are based on texture of the surface layer, content of rock fragments and organic matter in the surface layer, thickness of the surface layer, and slope. The soils are described as having a low, moderate, or high potential for this kind of damage. The ratings indicate an evaluation of the potential impact of prescribed fires or wildfires that are intense enough to remove the duff layer and consume organic matter in the surface layer.

Ratings in the column *potential for seedling mortality* are based on flooding, ponding, depth to a water table, content of lime, reaction, salinity, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. The soils are described as having a low, moderate, or high potential for seedling mortality.

Recreational Development

The titles of the tables described in this section are:

- "Camp Areas, Picnic Areas, and Playgrounds"
- "Paths, Trails, and Golf Fairways"

In the tables described in this section, the soils of the survey area are rated according to limitations that affect their suitability for recreational development. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season

when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in these tables can be supplemented by other information in this survey, for example, interpretations for dwellings without basements, for local roads and streets, and for septic tank absorption fields.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Off-road motorcycle trails require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, slope, depth to a water table, ponding, flooding, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic

materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

Wildlife Habitat

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. The kind and abundance of wildlife depend largely on the amount and distribution of food, cover, and water. Wildlife habitat can be created or improved by planting appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of grain and seed crops are corn, wheat, oats, and barley.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture also are considerations. Examples of grasses and legumes are fescue, lovegrass, bromegrass, clover, and alfalfa.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of wild herbaceous plants are bluestem, goldenrod, beggarweed, wheatgrass, and grama.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, poplar, cherry, sweetgum, apple, hawthorn, dogwood, hickory, blackberry, and blueberry. Examples of fruit-producing shrubs that are suitable for planting on soils rated *good* are Russian olive, autumn olive, and crabapple.

Coniferous plants furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, spruce, fir, cedar, and juniper.

Shrubs are bushy woody plants that produce fruit, buds, twigs, bark, and foliage. Soil properties and features that affect the growth of shrubs are depth of the root zone, available water capacity, salinity, and soil moisture. Examples of shrubs are mountain mahogany, bitterbrush, snowberry, and big sagebrush.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, salinity, slope, and surface stoniness. Examples of wetland plants are smartweed, wild millet, wildrice, saltgrass, cordgrass, rushes, sedges, and reeds.

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil

properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include bobwhite quail, pheasant, meadowlark, field sparrow, cottontail, and red fox.

Habitat for woodland wildlife consists of areas of deciduous and/or coniferous plants and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, ruffed grouse, woodcock, thrushes, woodpeckers, squirrels, gray fox, raccoon, deer, and bear.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver.

Habitat for rangeland wildlife consists of areas of shrubs and wild herbaceous plants. Wildlife attracted to rangeland include antelope, deer, sage grouse, meadowlark, and lark bunting.

Hydric Soils

This section lists the map unit components that are rated as hydric soils in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in “Soil Taxonomy” (Soil Survey Staff, 1999) and “Keys to Soil Taxonomy” (Soil Survey Staff, 2006) and in the “Soil Survey Manual” (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in “Field Indicators of Hydric Soils in the United States” (Hurt and others, 2002).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes (for example, 2B3). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
   A. are somewhat poorly drained and have a water table at the surface (0.0 feet) during the growing season, or
   B. are poorly drained or very poorly drained and have either:
      1) a water table at the surface (0.0 feet) during the growing season if textures are coarse sand, sand, or fine sand in all layers within a depth of 20 inches, or
      2) a water table at a depth of 0.5 foot or less during the growing season if permeability is equal to or greater than 6.0 in/hr in all layers within a depth of 20 inches, or
      3) a water table at a depth of 1.0 foot or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 inches.
3. Soils that are frequently ponded for long or very long duration during the growing season.
4. Soils that are frequently flooded for long or very long duration during the growing season.

The following map units meet the definition of hydric soils and, in addition, have at least one of the hydric soil indicators. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

BaA Bibb soils, 0 to 2 percent slopes, frequently flooded
CoA Coxville loam, 0 to 2 percent slopes
JmA Johnston soils, 0 to 2 percent slopes, frequently flooded
LuA Lumbee sandy loam, 0 to 2 percent slopes, rarely flooded
McA McColl loam, 0 to 1 percent slopes, ponded
OsA Osier loamy sand, 0 to 2 percent slopes, rarely flooded
PcA Pamlico and Johnston soils, 0 to 1 percent slopes, frequently flooded
PnA Pantego loam 0 to 2 percent slopes
PuA Plummer and Osier soils, 0 to 2 percent slopes
PxA Paxville loam, 0 to 1 percent slopes, rarely flooded
RaA Rains fine sandy loam, 0 to 2 percent
RuA Rutlege loamy sand, 0 to 2 percent slopes, rarely flooded

Map units that are made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units made up of

nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, construction materials, and water management. The ratings are based on observed performance of the soils and on the data in the tables described under the heading "Soil Properties."

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 to 7 feet of the surface, soil wetness, depth to a water table, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, reclamation material, roadfill, and topsoil; plan structures for water management; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Building Site Development

The titles of the tables described in this section are:

- "Dwellings and Small Commercial Buildings"
- "Roads and Streets, Shallow Excavations, and Lawns and Landscaping"

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. The tables described in this section show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope.

The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Sanitary Facilities

The titles of the tables described in this section are:

- "Sewage Disposal"
- "Landfills"

These tables show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

A *trench sanitary landfill* is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

In an *area sanitary landfill*, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is

placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

Construction Materials

The titles of the tables described in this section are:

- “Source of Sand and Gravel”
- “Source of Reclamation Material, Roadfill, and Topsoil”

These tables give information about the soils as potential sources of gravel, sand, reclamation material, roadfill, and topsoil. Normal compaction, minor processing, and other standard construction practices are assumed.

Gravel and *sand* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In the table “Source of Sand and Gravel,” only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

The soils are rated *good, fair,* or *poor* as potential sources of sand and gravel. A rating of *good* or *fair* means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand or gravel. The number 0.00 indicates that the layer is a poor source. The number 1.00 indicates that

the layer is a good source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.

In the table "Source of Reclamation Material, Roadfill, and Topsoil," the rating class terms are *good, fair,* and *poor*. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of reclamation material, roadfill, and topsoil. The lower the number, the greater the limitation.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Water Management

The table "Ponds and Embankments" gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected.

Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. Embankments that have zoned construction (core and shell) are not considered. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey.

Soil properties are determined by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in tables. They include engineering index properties, physical and chemical properties, and pertinent soil and water features.

Engineering Soil Properties

The table described in this section gives the engineering classifications and the range of engineering properties for the layers of each soil in the survey area.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. “Loam,” for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, “gravelly.” Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group

index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest. The AASHTO classification for soils tested, with group index numbers in parentheses, is given in the table "Engineering Index Test Data."

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

Physical Soil Properties

The table described in this section shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In the table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^1/_3$- or $^1/_{10}$-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute linear extensibility, shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Saturated hydraulic conductivity refers to the ability of a soil to transmit water or air. The term "permeability," as used in soil surveys, indicates saturated hydraulic conductivity (K_{sat}). The estimates in the table indicate the rate of water movement, in

micrometers per second, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In the table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in the table as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the "National Soil Survey Handbook," which is available in local offices of the Natural Resources Conservation Service or on the Internet.

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion.

There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Chemical Soil Properties

The table described in this section shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

Effective cation-exchange capacity refers to the sum of extractable bases plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

Soil reaction is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Salinity is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils. The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the table. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

Water Features

The table described in this section gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

The *months* in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. The table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of

flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Soil Features

The table described in this section gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness and thickness of the restrictive layer, both of which significantly affect the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Subsidence is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. The table shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate,* or *high,* is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low, moderate,* or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1999 and 2006). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Alfisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Udalf (*Ud*, meaning humid, plus *alf*, from Alfisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Hapludalfs (*Hapl*, meaning minimal horizonation, plus *udalf*, the suborder of the Alfisols that has a udic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Hapludalfs.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-loamy, mixed, active, mesic Typic Hapludalfs.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

The table “Taxonomic Classification of the Soils” indicates the order, suborder, great group, subgroup, and family of the soil series in the survey area.

Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each

series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows standards in the “Soil Survey Manual” (Soil Survey Division Staff, 1993) and in the “Field Book for Describing and Sampling Soils” (Schoeneberger and others, 2002). Many of the technical terms used in the descriptions are defined in “Soil Taxonomy” (Soil Survey Staff, 1999) and in “Keys to Soil Taxonomy” (Soil Survey Staff, 2006). Unless otherwise indicated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

Ailey Series

Depth class: Moderately deep or deep to fragic soil properties and deep or very deep to densic materials
Agricultural drainage class: Well drained or somewhat excessively drained
Internal free water occurrence: Deep or very deep, common, thin
Saturated hydraulic conductivity: Moderately low
Landscape: Upper Coastal Plain and Sandhills
Landform: Ridges and low hills
Parent material: Sandy and loamy marine deposits
Slope: 0 to 15 percent
Taxanomic class: Loamy, kaolinitic, thermic Arenic Kanhapludults (fig. 2)

Typical Pedon

Ailey loamy sand; in Wilkinson County, Georgia, about 2.2 miles east of Georgia Highway 243 at Ivey on Jackson Road, 0.2 mile north on Smith Chapel Road, 30 feet east of paved road, in wooded area.

Ap—0 to 5 inches; dark grayish brown (10YR 4/2) loamy sand; weak fine granular structure; very friable; non-sticky and non-plastic; common fine and few medium and coarse roots; strongly acid; gradual wavy boundary.
E—5 to 24 inches; yellowish brown (10YR 5/4) loamy sand; weak fine granular structure; very friable; non-sticky and non-plastic; few fine to coarse roots; moderately acid; clear smooth boundary.
Bt1—24 to 29 inches; yellowish brown (10YR 5/8) sandy loam; weak fine subangular blocky structure; friable; non-sticky and non-plastic; few fine roots; common clay bridges between sand grains; strongly acid; gradual wavy boundary.
Bt2—29 to 36 inches; yellowish brown (10YR 5/8) sandy clay loam; weak fine and medium subangular blocky structure; friable; slightly sticky and slightly plastic; few fine roots; few faint clay films on faces of peds; few fine prominent yellowish red (5YR 5/8) masses of oxidized iron in the lower part; strongly acid; gradual wavy boundary.
Btx—36 to 50 inches; 65 percent yellowish brown (10YR 5/8) and strong brown (7.5YR 5/6) sandy clay loam; moderate fine subangular blocky structure; firm; slightly sticky and slightly plastic; 35 percent red (2.5YR 4/8) sandy clay loam; strong coarse platy structure; very firm; brittle; hard when dry; platy peds are horizontally oriented and are relic redoximorphic features; few roots between peds; few faint clay films on faces of peds; strongly acid; clear smooth boundary.
2Cd—50 to 80 inches; red (2.5YR 4/8) sandy loam and coarse sandy loam; massive; very firm; hard when dry; non-sticky and non-plastic; few roots along interior of gray sandy clay loam seams spaced 6 to more than 10 inches apart; common coarse distinct strong brown (7.5YR 5/6) masses of oxidized iron; common coarse distinct light brownish gray (10YR 6/2) iron depletions; strongly acid.

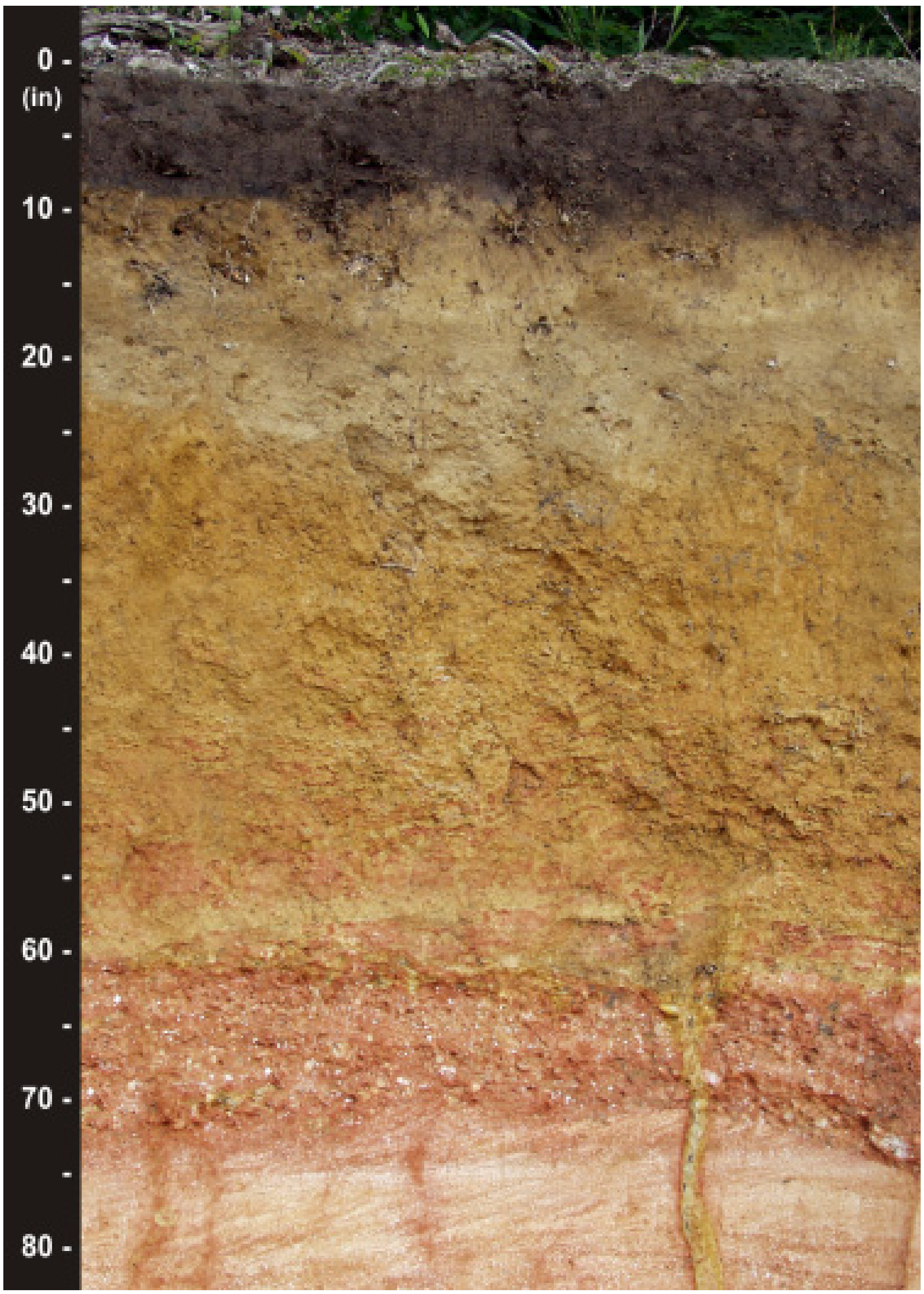


Figure 2—Profile of a soil in the Ailey series.

Range in Characteristics

Depth to top of argillic and kandic horizons: 20 to 40 inches
Depth to fragic soil properties: 26 to 60 inches
Depth to densic materials: 40 to more than 80 inches
Rock fragment content: 0 to 35 percent; mostly quartz gravel
Soil reaction: Very strongly acid to slightly acid, except where lime has been applied
Other distinctive features: 0 to 5 percent clay bodies (kaolin) in the B and C horizons

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 to 3
Texture (fine-earth fraction)—coarse sand, sand, loamy coarse sand, or loamy sand

E horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 3 to 8
Texture (fine-earth fraction)—coarse sand, sand, loamy coarse sand, or loamy sand

BE horizon (where present):
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 4 to 8
Texture (fine-earth fraction)—loamy coarse sand, loamy sand, coarse sandy loam, or sandy loam

Bt horizon:
Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 4 to 8; or variegated in shades of these colors in the lower part
Texture (fine-earth fraction)—coarse sandy loam, sandy loam, or sandy clay loam
Redoximorphic features (where present)—masses of oxidized iron in shades of red and brown

Btx horizon:
Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 4 to 8; or variegated in shades of these colors
Texture (fine-earth fraction)—sandy loam, sandy clay loam, or sandy clay
Redoximorphic features (where present)—masses of oxidized iron in shades of red and brown and iron depletions in shades of brown and gray

BC horizon (where present):
Color—hue of 2.5YR to 10YR, value of 4 to 7, and chroma of 4 to 8; or variegated in shades of these colors
Texture (fine-earth fraction)—sandy loam, sandy clay loam, or sandy clay
Redoximorphic features (where present)—masses of oxidized iron in shades of red and brown and iron depletions in shades of brown and gray; these features may be relic or contemporary

2Cd or Cd horizon (where present):
Color—hue of 2.5YR to 10YR, value of 4 to 7, and chroma of 4 to 8; or variegated in shades of these colors
Texture (fine-earth fraction)—coarse sandy loam, sandy loam, sandy clay loam, and clay loam; thin subhorizons of sandy clay in some pedons
Redoximorphic features (where present)—masses of oxidized iron in shades of red and brown and iron depletions in shades of brown and gray
Other distinctive features—dense and compact in place; roots generally only penetrate gray seams

2C or C horizon (where present):
Color—hue of 2.5YR to 10YR, value of 4 to 7, and chroma of 1 to 8; or variegated in shades of these colors

Texture (fine-earth fraction)—coarse sandy loam, sandy loam, sandy clay loam, or clay loam; subhorizons of clayey or silty materials in some pedons
Redoximorphic features (where present)—masses of oxidized iron in shades of red and brown and iron depletions in shades of brown and gray

Autryville Series

Depth class: Very deep
Agricultural drainage class: Well drained
Internal free water occurrence: Deep, transitory
Saturated hydraulic conductivity: Moderately high
Landscape: Upper Coastal Plain
Landform: Ridges on marine terraces and uplands
Parent material: Sandy and loamy marine deposits
Slope: 0 to 6 percent
Taxanomic class: Loamy, siliceous, subactive, thermic Arenic Paleudults

Typical Pedon

Autryville loamy sand; in Sampson County, North Carolina, about 5.0 miles north of Salemburg on N.C. Highway 242, about 3.5 miles northwest of Piney Green, 0.4 mile southwest of the intersection of Secondary Road 1466 and Secondary Road 1456,about 50 feet west of Secondary Road 1466, in cultivated area.

Ap—0 to 9 inches; grayish brown (10YR 5/2) loamy sand; weak medium granular structure; very friable; many fine roots; moderately acid; abrupt smooth boundary.
E—9 to 23 inches; pale brown (10YR 6/3) loamy sand; weak medium granular structure; very friable; few fine roots; thin coatings of silt and clay on 50 percent of sand grains; strongly acid; clear smooth boundary.
BE—23 to 26 inches; brownish yellow (10YR 6/8) loamy sand; weak medium granular structure; very friable; few fine roots; sand grains weakly bridged with clay; strongly acid; clear smooth boundary.
Bt—26 to 41 inches; yellowish brown (10YR 5/8) sandy loam; weak medium subangular blocky structure; very friable; slightly sticky and slightly plastic; few fine roots; coated sand grains weakly bridged with clay; strongly acid; clear wavy boundary.
BCt—41 to 46 inches; brownish yellow (10YR 6/6) loamy sand; weak medium granular structure; very friable; sand grains weakly bridged with clay; very strongly acid; clear irregular boundary.
E´—46 to 58 inches; very pale brown (10YR 7/4) sand; single grain; loose; thin coatings of silt and clay on 50 percent of sand grains; very strongly acid; clear wavy boundary.
B´t—58 to 85 inches; brownish yellow (10YR 6/8) sandy clay loam that has pockets of sandy loam; weak fine subangular blocky structure; friable; slightly sticky and slightly plastic; yellowish red (5YR 5/8) masses of oxidized iron; common medium distinct light gray (10YR 7/1) iron depletions; very strongly acid.

Range in Characteristics

Thickness of sandy surface and subsurface layers: 20 to 40 inches
Depth to top of argillic horizon: 20 to 40 inches
Depth to base of argillic horizon: More than 60 inches
Rock fragment content: 0 to 15 percent
Soil reaction: Very strongly acid to slightly acid, except where lime has been applied

Other distinctive features: Bisequel pedons, which have sandy E horizons and loamy Bt horizons

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 to 3
Texture—sand, fine sand, loamy sand, or loamy fine sand

E horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 3 to 8
Texture—sand, fine sand, loamy sand, or loamy fine sand

BE horizon:
Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 3 to 8
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

Bt horizon:
Color—hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 4 to 8
Texture—sandy loam, fine sandy loam, or sandy clay loam

BCt horizon or BC horizon (where present):
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 8
Texture—loamy sand, loamy fine sandy, sandy loam, or fine sandy loam

E´ horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 1 to 8
Texture—sand, fine sand, loamy sand, or loamy fine sand

B´t horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 8
Texture—loamy fine sand, sandy loam, fine sandy loam, or sandy clay loam
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, olive, and gray

B´tg horizon (where present):
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture—loamy fine sand, sandy loam, fine sandy loam, or sandy clay loam
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, olive, and gray

C horizon (where present):
Color—hue of 7.5YR to 2.5Y, value of 4 to 8, and chroma of 3 to 8; or variegated in shades of these colors
Texture—stratified sandy or loamy material
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, olive, and gray

Bibb Series

Depth class: Very deep
Agricultural drainage class: Poorly drained
Internal free water occurrence: Very shallow or shallow, persistent, thick
Flooding: Frequent
Saturated hydraulic conductivity: High
Landscape: Upper Coastal Plain and Sandhills
Landform: Flood plains
Parent material: Sandy and loamy alluvium
Slope: 0 to 2 percent
Taxanomic class: Coarse-loamy, siliceous, active, acid, thermic Typic Fluvaquents

Typical Pedon

Bibb sandy loam; in Autauga County, Alabama, about 300 yards north of where Martin Boulevard crosses Pine Creek in Prattville, in wooded area.

A—0 to 4 inches; brown (10YR 4/3) sandy loam; weak fine granular structure; friable; common fine roots and pores; strongly acid; abrupt wavy boundary.

Ag—4 to 12 inches; variegated dark gray (N 4/) and dark grayish brown (10YR 4/2) sandy loam; weak fine granular structure; friable; few fine roots and pores; common fine strong brown (7.5YR 5/6) stains around old roots; strongly acid; clear wavy boundary.

Cg1—12 to 37 inches; gray (5Y 5/1) sandy loam; massive; friable; few fine roots and pores; common medium strong brown (7.5YR 5/6) stains around old roots; common thin strata of silt loam to loamy sand; bits of partially decomposed organic material in some strata; very strongly acid; clear wavy boundary.

Cg2—37 to 60 inches; gray (N 5/) silt loam; massive; slightly sticky; common strata of sandy loam and loamy sand; common thin strata that has partially decomposed organic material; strongly acid.

Range in Characteristics

Depth to strongly gleyed horizons: 0 to 6 inches to horizons that have matrix color that has chroma of 0 to 2

Rock fragment content: 0 to 10 percent, throughout; may range to 35 percent in thin strata below a depth of 40 inches

Soil reaction: Extremely acid to strongly acid, except where lime has been applied

Mica content: None to common

Ap or A horizon:

Color—hue of 7.5YR or 10YR, value of 2 to 5, and chroma of 1 to 3

Texture—sand, loamy sand, loamy fine sand, fine sandy loam, sandy loam, loam, or silt loam

Ag horizon (where present):

Color—hue of 10YR or 2.5Y, value of 3 to 7 and chroma of 0 to 2; or neutral and has value of 3 to 7

Texture—sand, loamy sand, loamy fine sand, fine sandy loam, sandy loam, loam, or silt loam

Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown

Cg horizon:

Color—hue of 5BG to 10YR, value of 3 to 7, and chroma of 0 to 2; or neutral and has value of 3 to 7

Texture—sandy loam, fine sandy loam, loam, or silt loam; or stratified with these textures in the upper part and includes sand, loamy sand, and loamy fine sand in the lower part

Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown

Blanton Series

Depth class: Very deep

Agricultural drainage class: Somewhat excessively drained to moderately well drained

Internal free water occurrence: Moderately deep to very deep, common, thin

Saturated hydraulic conductivity: Moderately high or high

Landscape: Coastal Plain and Sandhills

Landform: Uplands
Parent material: Sandy and loamy marine deposits and eolian sands
Slope: 8 to 15 percent
Taxonomic class: Loamy, siliceous, semiactive, thermic Grossarenic Paleudults

Typical Pedon

Blanton fine sand; in Columbia County, Florida, approximately 3.0 miles southwest of intersection of I-75 and U.S. Highway 90 on State Road 252, about 1.0 mile south on graded road, 0.13 mile west on unimproved woods roads, in wooded area.

Ap—0 to 7 inches; gray (10YR 6/1) fine sand; weak fine granular structure; very friable; many fine and common roots; strongly acid; clear wavy boundary.

E1—7 to 37 inches; very pale brown (10YR 7/3) fine sand; common medium faint very pale brown (10YR 8/2) streaks of clean sand grains; many uncoated sand grains; single grain; loose; common fine roots; strongly acid; gradual smooth boundary.

E2—37 to 52 inches; light gray (10YR 7/2) fine sand; many medium faint very pale brown (10YR 8/2) and few fine faint very pale brown (10YR 8/2) streaks of clean sand grains; many uncoated sand grains; single grain; loose; few fine roots; strongly acid; clear wavy boundary.

Bt1—52 to 62 inches; light yellowish brown (10YR 6/4) fine sandy loam; moderate medium granular structure; friable; coated sand grains bridged with clay; few fine faint brownish yellow (10YR 6/8) masses of oxidized iron; very strongly acid; gradual wavy boundary.

Bt2—62 to 67 inches; very pale brown (10YR 7/4) fine sandy loam; weak fine subangular blocky structure; friable; coated sand grains bridged with clay; few faint clay films on faces of peds and in pores; many medium distinct strong brown (7.5YR 5/8) masses of oxidized iron; common medium distinct pale brown (10YR 6/3) iron depletions; very strongly acid; gradual wavy boundary.

Btg—67 to 80 inches; light brownish gray (10YR 6/2) fine sandy loam; weak fine subangular blocky structure; grayish materials are friable; yellowish and brownish materials are firm; coated sand grains bridged with clay; few discontinuous clay films on faces of peds; many medium distinct strong brown (7.5YR 5/8) masses of oxidized iron; very strongly acid.

Range in Characteristics

Depth to top of argillic and kandic horizons: 40 to 80 inches
Depth to lithologic discontinuity (contrasting sand sizes): 40 to more than 80 inches
Rock fragment content: 0 to 10 percent; mostly quartz and ironstone gravel
Soil reaction: Very strongly acid to moderately acid, except where lime has been applied

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 7, and chroma of 1 to 4
Texture—coarse sand, sand, fine sand, loamy sand, or loamy fine sand

E horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 to 8, and chroma of 1 to 8
Texture—coarse sand, sand, fine sand, loamy sand, or loamy fine sand

Bt horizon:
Color—hue of 2.5YR to 7.5YR, value of 5 to 7, and chroma of 3 to 8; or variegated in shades of these colors in the lower part
Texture—loamy sand, loamy coarse sand, loamy fine sand, sandy loam, fine sandy loam, or sandy clay loam
Redoximorphic features—masses of oxidized iron in shades of red and brown in the upper 10 inches of most pedons

Btg horizon (where present):
Color—hue of 7.5YR to 5Y, value of 5 to 8, and chroma of 1 or 2
Texture—sandy loam, fine sandy loam, or sandy clay loam; sandy clay below 60 inches
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Bragg Series

Depth class: Very deep
Agricultural drainage class: Well drained
Internal free water occurrence: Very deep
Saturated hydraulic conductivity: Moderately high
Landscape: Upper Coastal Plain and Sandhills
Landform: Summits and low hills
Parent material: Loamy earthy fill
Slope: 1 to 4 percent
Taxanomic class: Fine-loamy, siliceous, semiactive, acid, thermic Typic Udorthents

Typical Pedon

Bragg sandy loam; in Cumberland County, North Carolina, on Fort Bragg Military Reservation, about 2.0 miles northwest from intersection of Macridge Road and Plank Road, 500 feet west of Macridge Road, near center of range no.42.

Ap—0 to 6 inches; strong brown (7.5YR 5/8) sandy loam; massive; friable; strongly acid; clear wavy boundary.
C1—6 to 20 inches; strong brown (7.5YR 5/8), grayish brown (10YR 5/2), and light gray (10YR 6/1) sandy clay loam; massive; firm; slightly sticky; strongly acid; clear wavy boundary.
C2—20 to 30 inches; reddish yellow (7.5YR 6/8) sandy clay loam; common medium light gray (N 7/0) clay bodies and strata; massive; firm; slightly sticky; strongly acid; clear smooth boundary.
C3—30 to 40 inches; light yellowish brown (10YR 6/4) sandy clay; common medium distinct red (2.5YR 5/8) mottles; massive; firm; slightly sticky; strongly acid; clear wavy boundary.
C4—40 to 49 inches; reddish yellow (7.5YR 6/8) sandy clay loam that has common medium distinct light gray (N 7/0) clay bodies; massive; friable; slightly sticky; strongly acid; clear wavy boundary.
C5—49 to 56 inches; yellowish red (5YR 5/6) sandy clay loam; common medium distinct brownish yellow (10YR 6/8) mottles; massive; firm; slightly sticky; strongly acid; clear wavy boundary.
C6—56 to 72 inches; light red (2.5YR 6/8) sandy clay; common medium distinct reddish yellow (7.5YR 6/8) mottles; massive; firm; slightly sticky; common fine bodies of clay; strongly acid; abrupt smooth boundary.
A1b—72 to 76 inches; very dark gray (N 3/0) loamy sand; weak fine granular structure; very friable; strongly acid; clear smooth boundary.
A2b—76 to 80 inches; brown (10YR 4/3) loamy sand; weak fine granular structure; very friable; strongly acid.

Range in Characteristics

Thickness of fill material: 20 to more than 80 inches
Rock fragment content: 0 to 3 percent; mostly quartz and ironstone gravel
Soil reaction: Very strongly acid or strongly acid, except where lime has been applied

Ap horizon:
Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 1 to 8
Texture—loamy sand, sandy loam, fine sandy loam, or sandy clay loam

C horizon:
Color—hue of 2.5YR to 10YR, value of 3 to 7, and chroma of 4 to 8; or variegated in shades of these colors in the lower part; soil colors generally are contrasting from layer to layer; low chroma colors indicative of a condition of the original soil, not wetness
Texture—sandy loam, sandy clay loam, clay loam, or sandy clay

Candor Series

Depth class: Very deep
Agricultural drainage class: Somewhat excessively drained
Internal free water occurrence: Deep or very deep, transitory
Saturated hydraulic conductivity: High or very high
Landscape: Upper Coastal Plain and Sandhills
Landform: Uplands and low hills
Parent material: Sandy and loamy marine deposits and eolian sands
Slope: 0 to 15 percent
Taxonomic class: Sandy, siliceous, thermic Grossarenic Kandiudults (fig. 3)

Typical Pedon

Candor sand; in Montgomery County, North Carolina, about 3.0 miles south of Candor on U.S. Highway 220, about 4.6 miles southeast on Secondary Road 1003, about 0.7 mile northeast on a road through a field and woods to a cable, 35 feet northeast of cable, in wooded area.

A—0 to 3 inches; dark grayish brown (10YR 4/2) sand; weak fine granular structure; very friable; common fine and medium and few coarse roots; extremely acid; clear smooth boundary.
E—3 to 23 inches; light yellowish brown (10YR 6/4) sand; weak fine granular structure; very friable; common fine and few medium and coarse roots; very strongly acid; gradual wavy boundary.
Bt—23 to 37 inches; yellowish brown (10YR 5/6) loamy sand; weak medium granular structure; very friable; few fine and medium roots; 5 percent clay bridges between sand grains; very strongly acid; gradual wavy boundary.
BE—37 to 44 inches; brownish yellow (10YR 6/6) coarse sand; weak medium granular structure; very friable; few fine roots; very strongly acid; gradual wavy boundary.
E´—44 to 57 inches; pale yellow (2.5Y 7/4) sand; single grain; loose; 15 percent pockets of clean sand grains; very strongly acid; gradual wavy boundary.
B´t1—57 to 63 inches; light yellowish brown (10YR 6/4) loamy sand; weak coarse subangular blocky structure; friable; 5 percent clay bridges between sand grains; 5 percent coats of sand on faces of peds; very strongly acid; gradual wavy boundary.
B´t2—63 to 69 inches; strong brown (7.5YR 5/8) sandy loam; weak coarse subangular blocky structure; friable; 10 percent clay bridges between sand grains; 15 percent medium faint red (2.5YR 5/8) masses of oxidized iron; 10 percent medium prominent very pale brown (10YR 7/3) iron depletions; 3 percent rounded 2 to 75 millimeter quartz fragments; very strongly acid; gradual wavy boundary.
B´t3—69 to 80 inches; strong brown (7.5YR 5/8) sandy clay loam; weak medium subangular blocky structure; friable; 10 percent red (2.5YR 5/8) clay loam; weak

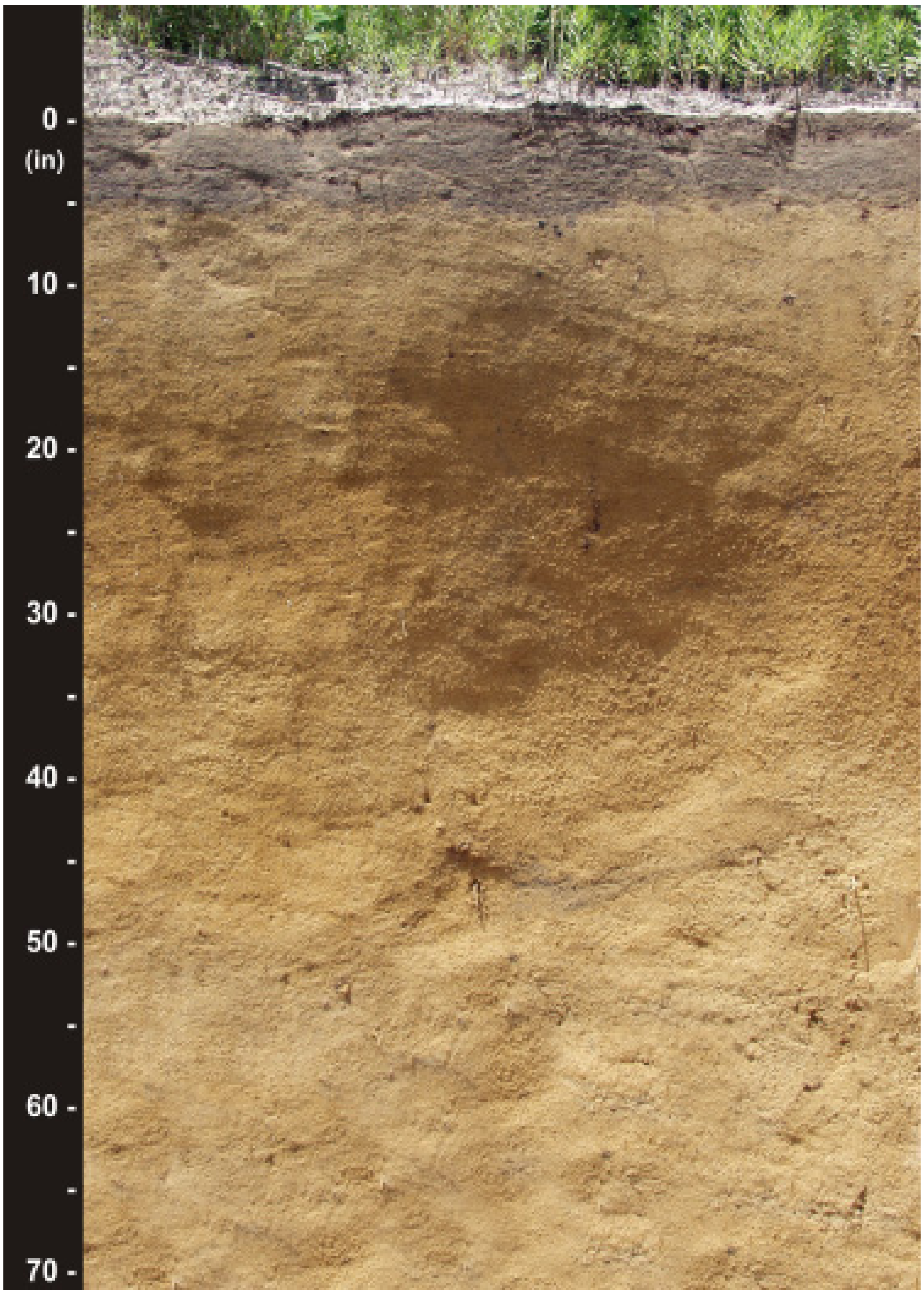


Figure 3—Profile of a soil in the Candor series.

medium platy structure; very firm and brittle; 5 percent clay bridges between sand grains; red areas are masses of oxidized iron; 10 percent medium prominent light gray (10YR 7/2) iron depletions; 10 percent rounded, 2 to 75 millimeter quartz fragments; strongly acid.

Range in Characteristics

Depth to top of argillic horizon: 20 to 40 inches
Rock fragment content: 0 to 15 percent; some pedons range to 35 percent below a depth of about 40 inches
Soil reaction: Extremely acid to strongly acid, except where lime has been applied
Thickness of sandy horizons: 40 to 80 inches
Mica content: None to common flakes of mica
Other distinctive features: 0 to 20 percent fine to medium bodies of white kaolin in some pedons; lower Bt is partly brittle, dense, and compact in some pedons; 3 to 10 percent plinthite at a depth of 60 to 80 inches on some smooth to gently sloping interstream divides

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 or 3
Texture—coarse sand or sand

E horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 6
Texture—coarse sand or sand

Bt horizon:
Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 4 to 8
Texture—loamy coarse sand or loamy sand

BE horizon or BC horizon (where present):
Color—hue of 7.5YR to 2.5Y, value of 5 to 8, and chroma of 3 to 8
Texture—coarse sand, sand, loamy coarse sand, or loamy sand

E´ horizon:
Color—hue of 7.5YR or 10YR, value of 5 to 8, and chroma of 3 to 8; or variegated in shades of these colors
Texture—coarse sand, sand, loamy coarse sand, or loamy sand

B´t horizon (upper part):
Color—hue of 5YR to 10YR, value of 5 or 6, and chroma of 4 to 8; or variegated in shades of yellow, brown, and red
Texture (fine-earth fraction)—loamy coarse sand, loamy sand, coarse sandy loam, sandy loam, sandy clay loam, or sandy clay

B´t horizon (lower part) or Bt horizons (where present):
Color—hue of 5YR to 10YR, value of 5 or 6, and chroma of 4 to 8; or variegated in shades of yellow, brown, and red
Texture (fine-earth fraction)—loamy coarse sand, loamy sand, coarse sandy loam, sandy loam, sandy clay loam, or sandy clay
Redoximorphic features—masses of oxidized iron in shades of yellow, brown and red and iron depletions in shades of gray and white below 48 inches

BC horizon (where present):
Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 4 to 8
Texture (fine-earth fraction)—coarse sand or sand
Redoximorphic features—masses of oxidized iron in shades of yellow, brown, and red and iron depletions in shades of gray and white below 48 inches

C horizon (where present):
Color—hue of 7.5YR to 2.5Y, value of 5 to 8, and chroma of 3 to 8
Texture (fine-earth fraction)—coarse sandy loam, sandy loam, sandy clay loam, sandy clay, or clay
Redoximorphic features (where present)—masses of oxidized iron in shades of yellow, brown, and red and iron depletions in shades of gray and white

Coxville Series

Depth class: Very deep
Agricultural drainage class: Poorly drained
Internal free water occurrence: Very shallow or shallow, common to persistent
Saturated hydraulic conductivity: Moderately high
Landscape: Upper Coastal Plain
Landform: Flats, Carolina bays, and depressions
Parent material: Clayey marine deposits
Slope: 0 to 2 percent
Taxanomic class: Fine, kaolinitic, thermic Typic Paleaquults (fig. 4)

Typical Pedon

Coxville fine sandy loam; in Pitt County, North Carolina, about 1.0 mile south of Greenville on N.C. Highway 43, about 300 feet east from road, in cultivated area.

Ap—0 to 9 inches; dark gray (10YR 4/1) fine sandy loam; weak fine granular structure; very friable; common fine roots; slightly acid; clear wavy boundary.
Eg—9 to 11 inches; gray (10YR 6/1) fine sandy loam; weak fine granular structure; very friable; common fine roots; strongly acid; clear wavy boundary.
BEg—11 to 13 inches; grayish brown (10YR 5/2) sandy clay loam; weak medium subangular blocky structure; friable; slightly sticky and plastic; few fine roots; few fine distinct brownish yellow (10YR 6/8) masses of oxidized iron; very strongly acid; clear wavy boundary.
Btg1—13 to 25 inches; gray (10YR 5/1) sandy clay; moderate medium subangular blocky structure; firm; sticky and plastic; common faint clay films on vertical faces of peds and in root channels; few fine roots; few root channels; few medium prominent yellowish brown (10YR 5/6) masses of oxidized iron; very strongly acid; gradual wavy boundary.
Btg2—25 to 40 inches; gray (10YR 5/1) sandy clay; weak medium subangular blocky structure; firm; sticky and plastic; few faint clay films on faces of peds; common medium prominent brownish yellow (10YR 6/6) and red (2.5YR 4/6) masses of oxidized iron; very strongly acid; gradual wavy boundary.
Btg3—40 to 52 inches; gray (10YR 6/1) sandy clay; weak subangular blocky structure; firm; sticky and plastic; few faint clay films on vertical faces of peds; few medium prominent red (2.5YR 4/6) and reddish yellow (7.5YR 6/6) masses of oxidized iron; very strongly acid; gradual wavy boundary.
Btg4—52 to 72 inches; gray (10YR 6/1) sandy clay; weak medium subangular blocky structure; firm; sticky and plastic; pockets and lenses of clayey and sandy materials; common medium prominent reddish yellow (7.5YR 6/6) masses of oxidized iron; very strongly acid; gradual clear boundary.
Cg—72 to 80 inches; stratified sand, silt, and clay; very strongly acid.

Range in Characteristics

Rock fragment content: 0 to 15 percent throughout; less than 5 percent in most pedons

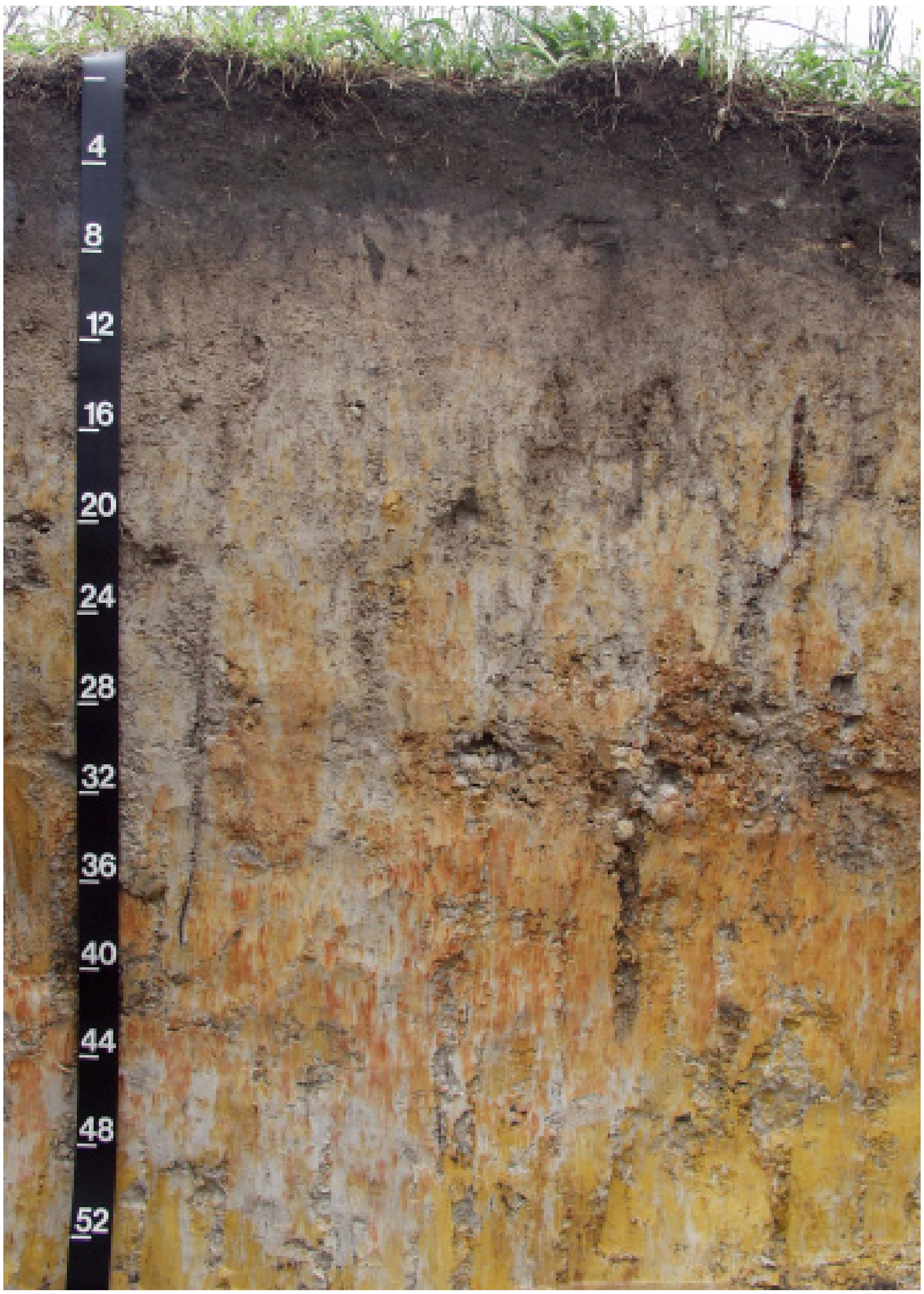


Figure 4—Profile of a soil in the Coxville series.

Soil reaction: Extremely acid to strongly acid, except where lime has been applied

Ap or A horizon:
Color—hue of 10YR to 5Y, value of 2 to 5, and chroma of 1 or 2; or neutral and has value of 2 to 5
Texture—fine sandy loam, sandy loam, loam, or sandy clay loam

Eg horizon (where present):
Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 1 or 2; or neutral and has value of 5 to 7
Texture—fine sandy loam, sandy loam, or loam
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of gray

BEg or BAg horizon (where present):
Color—hue of 10YR to 5Y, value of 4 to 6, and chroma of 1 or 2; or neutral and has value of 4 to 6
Texture—sandy clay loam, loam, or clay loam
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of gray

Btg horizon:
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2; or neutral and has value of 4 to 7
Texture—sandy clay, clay loam, or clay
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of gray

BCg or Cg horizons (where present):
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2; or neutral and has value of 4 to 7
Texture—stratified sandy, loamy, silty, or clayey sediments
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of gray

Dunbar Series

Depth class: Very deep
Agricultural drainage class: Somewhat poorly drained
Internal free water occurrence: Shallow or moderately deep, common to persistent
Saturated hydraulic conductivity: Moderately high
Landscape: Upper Coastal Plain
Landform: Flats and broad interstream divides
Parent material: Clayey marine deposits
Slope: 0 to 2 percent
Taxanomic class: Fine, kaolinitic, thermic Aeric Paleaquults

Typical Pedon

Dunbar sandy loam; in Robeson County, North Carolina, about 4.0 miles south of Red Springs, 0.25 mile east on N.C. Highway 2ll, about 40 feet south of Secondary Road 1507, in cultivated area.

Ap—0 to 8 inches; dark gray (10YR 4/1) sandy loam; weak medium and fine granular structure; very friable; many fine roots; strongly acid; clear smooth boundary.
Bt1—8 to l4 inches; light olive brown (2.5Y 5/4) clay loam; moderate medium subangular blocky structure; firm; plastic and sticky; many fine roots; few fine

pores; thin patchy clay films; few medium distinct dark gray (10YR 4/1) iron depletions in matrix; very strongly acid; gradual wavy boundary.

Btg1—14 to 20 inches; grayish brown (2.5Y 5/2) sandy clay; moderate medium subangular blocky structure; firm; plastic and sticky; few fine roots and pores; thin continuous clay films on faces of peds; many medium distinct light olive brown (2.5Y 5/4) masses of oxidized iron on faces of peds; very strongly acid; gradual wavy boundary.

Btg2—20 to 42 inches; gray (10YR 5/1) sandy clay; moderate medium subangular blocky structure; firm; sticky and plastic; few fine roots and pores; thin patchy clay films on faces of peds; common medium distinct yellowish brown (10YR 5/8) and yellowish red (5YR 5/8) masses of oxidized iron on faces of peds; very strongly acid; gradual wavy boundary.

Btg3—42 to 62 inches; gray (10YR 6/1) sandy clay; moderate medium subangular blocky structure; firm; few fine roots and pores; thin patchy clay films on faces of peds; few medium distinct yellowish brown (10YR 5/4) and brown (10YR 5/3) masses of oxidized iron on faces of peds; very strongly acid; gradual wavy boundary.

Cg—62 to 92 inches; light gray (10YR 7/1) sandy clay that has a few pockets of sandy clay loam; massive; firm; very strongly acid.

Range in Characteristics

Thickness of solum: More than 60 inches

Soil reaction: Strongly or very strongly acid, except where lime has been applied

Other distinctive features: Silt content less than 30 percent in particle-size control section

Ap or A horizon:

Color—hue of 10YR to 5Y, value of 2 to 5, and chroma of 1 or 2

Texture—sandy loam, fine sandy loam, or loam

E horizon (where present):

Color—hue of 10YR to 5Y, value of 4 to 6, and chroma of 1 to 4; or neutral and has value of 4 to 6

Texture—sandy loam, fine sandy loam, or loam

Bt horizon:

Color—hue of 7.5YR to 5Y, value of 4 to 6, and chroma of 3 to 8

Texture—sandy clay, clay loam, or clay

Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Btg horizon:

Color—hue of 7.5YR to 5Y, value of 4 to 6, and chroma of 1 or 2; or neutral and has value of 4 to 6

Texture—sandy clay, clay loam, or clay

Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

BCg horizon (where present):

Color—hue of 7.5YR to 5Y, value of 4 to 6, and chroma of 1 or 2; or neutral and has value of 4 to 6

Texture—sandy clay, sandy clay loam, clay loam, or clay

Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown

Cg horizon:
Color—gray or light gray
Texture—loamy sand, sandy loam, sandy clay loam, or sandy clay

Duplin Series

Depth class: Very deep
Agricultural drainage class: Moderately well drained
Internal free water occurrence: Moderately deep, common to persistent
Saturated hydraulic conductivity: Moderately high
Landscape: Upper Coastal Plain
Landform: Flats and broad interstream divides
Parent material: Clayey marine deposits
Slope: 0 to 2 percent
Taxanomic class: Fine, kaolinitic, thermic Aquic Paleudults

Typical Pedon

Duplin sandy loam; in Robeson County, North Carolina, about 3.0 miles east of Maxton on Secondary Road 1303, about 0.33 mile north on dirt road, 0.25 mile east on field road, 100 feet southeast, in cultivated field.

Ap—0 to 8 inches; grayish brown (10YR 5/2) sandy loam; weak granular structure; friable; many fine roots; many medium pores; neutral; clear smooth boundary.
Bt1—8 to 18 inches; yellowish brown (10YR 5/4) sandy clay; common medium faint brownish yellow (10YR 6/6) mottles; weak medium subangular blocky structure; firm; sticky and plastic; common fine roots; common medium pores; few faint clay films on faces of peds; very strongly acid; gradual wavy boundary.
Bt2—18 to 27 inches; yellowish brown (10YR 5/4) sandy clay; common coarse distinct light brownish gray (10YR 6/2) and few medium distinct brownish yellow (10YR 6/6) mottles; moderate medium subangular blocky structure; firm; sticky and plastic; few fine roots; common medium pores; few faint clay films on faces of peds; very strongly acid; gradual wavy boundary.
Bt3—27 to 54 inches; yellowish brown (10YR 5/4) sandy clay; many coarse distinct light brownish gray (10YR 6/2) and few fine prominent red mottles; moderate medium subangular blocky structure; firm; sticky and plastic; few fine roots and pores; few faint clay films on faces of peds; very strongly acid; gradual wavy boundary.
Bt4—54 to 84 inches; yellowish brown (10YR 5/4) sandy clay loam; many coarse distinct light brownish gray (10YR 6/2) and common medium faint brownish yellow (10YR 6/6) mottles; weak medium subangular blocky structure; friable; slightly sticky and slightly plastic; common medium pores; few distinct clay films; grayish areas are clean sand grains; very strongly acid; gradual wavy boundary.
Cg—84 to100 inches; light gray (10YR 7/1) sandy clay loam; many medium distinct pale brown (10YR 7/4) and yellowish red (5YR 5/6) mottles; massive; friable; slightly sticky; very strongly acid.

Range in Characteristics

Thickness of solum: More than 60 inches
Soil reaction: Strongly acid or very strongly acid, except where lime has been applied
Other distinctive features: Silt content less than 30 percent in particle-size control section

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 2 to 6, and chroma of 1 to 3; or neutral and has value of 2 to 6

Texture—sandy loam, fine sandy loam, very fine sandy loam, loam, or loamy sand

E horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 2 to 4
Texture—sandy loam, fine sandy loam, very fine sandy loam, loam, or loamy sand

BE horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 4 to 8
Texture—loam or sandy clay loam

Bt horizon (upper part):
Color—hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8
Texture—sandy clay, clay, clay loam, or sandy clay loam
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Bt horizon (lower part):
Color—hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8; or gray and has masses of oxidized iron
Texture—sandy clay, clay, clay loam, or sandy clay loam
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray; few strong brown to red nodules of plinthite in some pedons

BC horizon (where present):
Color—hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8; or gray and has masses of oxidized iron
Texture—sandy clay loam, clay loam, or sandy clay
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray; few strong brown to red nodules of plinthite in some pedons

C horizon:
Color—hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 1 to 6
Texture—sandy clay loam, sandy loam, sandy clay, or clay

Goldsboro Series

Depth class: Very deep
Agricultural drainage class: Moderately well drained
Internal free water occurrence: Moderately deep, transitory
Saturated hydraulic conductivity: Moderately high or high
Landscape: Upper Coastal Plain
Landform: Flats and broad interstream divides
Parent material: Loamy marine deposits
Slope: 0 to 2 percent
Taxanomic class: Fine-loamy, siliceous, subactive, thermic Aquic Paleudults

Typical Pedon

Goldsboro loamy sand; in Wayne County, North Carolina, about 5.0 miles northeast of Goldsboro, 0.4 mile north of Stony Creek Church, 0.3 mile west of intersection of Secondary Road 1523 and Secondary Road 1545, in cultivated area.

Ap—0 to 8 inches; grayish brown (10YR 5/2) loamy sand; weak medium granular structure; very friable; many fine roots; moderately acid; clear smooth boundary.

E—8 to 12 inches; pale brown (10YR 6/3) loamy sand; weak medium granular structure; very friable; many fine roots; moderately acid; clear smooth boundary.

BE—12 to 15 inches; brownish yellow (10YR 6/6) sandy loam; weak fine subangular blocky structure; friable; slightly sticky; many fine roots; strongly acid; clear smooth boundary.

Bt1—15 to 25 inches; yellowish brown (10YR 5/6) sandy clay loam; weak fine subangular blocky structure; friable; slightly sticky and slightly plastic; common fine roots; many clay bridges between sand grains; few faint clay films on faces of peds; very strongly acid; gradual wavy boundary.

Bt2—25 to 45 inches; pale brown (10YR 6/3) sandy clay loam; weak fine subangular blocky structure; friable; slightly sticky and slightly plastic; few fine roots; many clay bridges between sand grains; few faint clay films on faces of peds; common medium distinct yellowish brown (10YR 5/6) masses of oxidized iron; common medium distinct gray (10YR 5/1) iron depletions; very strongly acid; gradual wavy boundary.

Btg—45 to 65 inches; gray (10YR 6/1) sandy clay loam; weak fine subangular blocky structure; friable; slightly sticky and slightly plastic; many clay bridges between sand grains; few faint clay films on faces of peds; common medium prominent red (2.5YR 5/6) and common medium distinct brownish yellow (10YR 6/6) masses of oxidized iron; very strongly acid; gradual irregular boundary.

BCg—65 to 76 inches; gray (10YR 6/1) sandy loam and strata of sandy clay loam; weak fine subangular blocky structure; friable; slightly sticky and slightly plastic; common clay bridges between sand grains; common medium distinct brownish yellow (10YR 6/6) masses of oxidized iron; common medium faint gray (10YR 5/1) iron depletions; very strongly acid.

Range in Characteristics

Depth to top of argillic horizon: 5 to 19 inches
Depth to base of argillic horizon: 60 to more than 80 inches
Rock fragment content: 0 to 50 percent; mostly quartz gravel
Soil reaction: Extremely acid to strongly acid, except where lime has been applied
Other distinctive features: Silt content less than 30 percent in particle-size control section

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 2 to 6, and chroma of 1 to 4
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

E horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 2 to 6
Texture—loamy sand, loamy fine sand, sandy loam, and fine sandy loam

BE horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 6
Texture—sandy loam and fine sandy loam

Bt horizon (upper part):
Color—hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8
Texture (fine-earth fraction)—sandy clay loam, sandy loam, loam, or clay loam

Bt horizon (lower part):
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 3 to 8
Texture—sandy clay loam, sandy loam, loam, or clay loam; subhorizons of sandy clay or clay in some pedons
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray. Iron depletions are within 30 inches of the soil surface.

Btg horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2
Texture—sandy clay loam, sandy loam, loam, or clay loam; subhorizons of sandy clay or clay in some pedons
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

BCg horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2
Texture—sandy loam, fine sandy loam, sandy clay loam, or loam
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

BC horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 5
Texture—sandy loam, fine sandy loam, sandy clay loam, or loam
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Cg horizon (where present):
Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 1 or 2; or neutral and has value of 4 to 8
Texture—sandy, loamy, clayey, or stratified
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Gritney Series

Depth class: Very deep
Agricultural drainage class: Moderately well drained
Internal free water occurrence: Moderately deep, transitory
Saturated hydraulic conductivity: Moderately high
Landscape: Upper Coastal Plain
Landform: Ridges and side slopes
Parent material: Clayey marine deposits
Slope: 2 to 10 percent
Taxanomic class: Fine, mixed, semiactive, thermic Aquic Hapludults (fig. 5)

Typical Pedon

Gritney sandy loam; in Northampton County, North Carolina, about 5.6 miles east of Jackson on U.S. Highway 158, about 100 feet south of U.S. Highway 158, in cultivated field, about 90 feet east of cemetery in field.

Ap—0 to 6 inches; brown (10YR 5/3) sandy loam; weak medium granular structure; very friable; many fine roots; moderately acid; abrupt smooth boundary.
BE—6 to 9 inches; yellowish brown (10YR 5/6) sandy loam; weak medium subangular blocky structure; friable; few fine roots; few fine prominent yellowish red (5YR 5/8) masses of oxidized iron; moderately acid; abrupt smooth boundary.
Bt1—9 to 17 inches; yellowish brown (10YR 5/6) clay; common medium prominent red (2.5YR 4/8) mottles; moderate medium subangular blocky structure; firm; slightly sticky and slightly plastic; few fine roots; few faint clay films on faces of peds; few medium prominent dark red (2.5YR 3/6) masses of oxidized iron; strongly acid; clear smooth boundary.
Bt2—17 to 37 inches; yellowish brown (10YR 5/6) clay; moderate medium subangular blocky structure; very firm; sticky and plastic; few fine roots; common, distinct clay

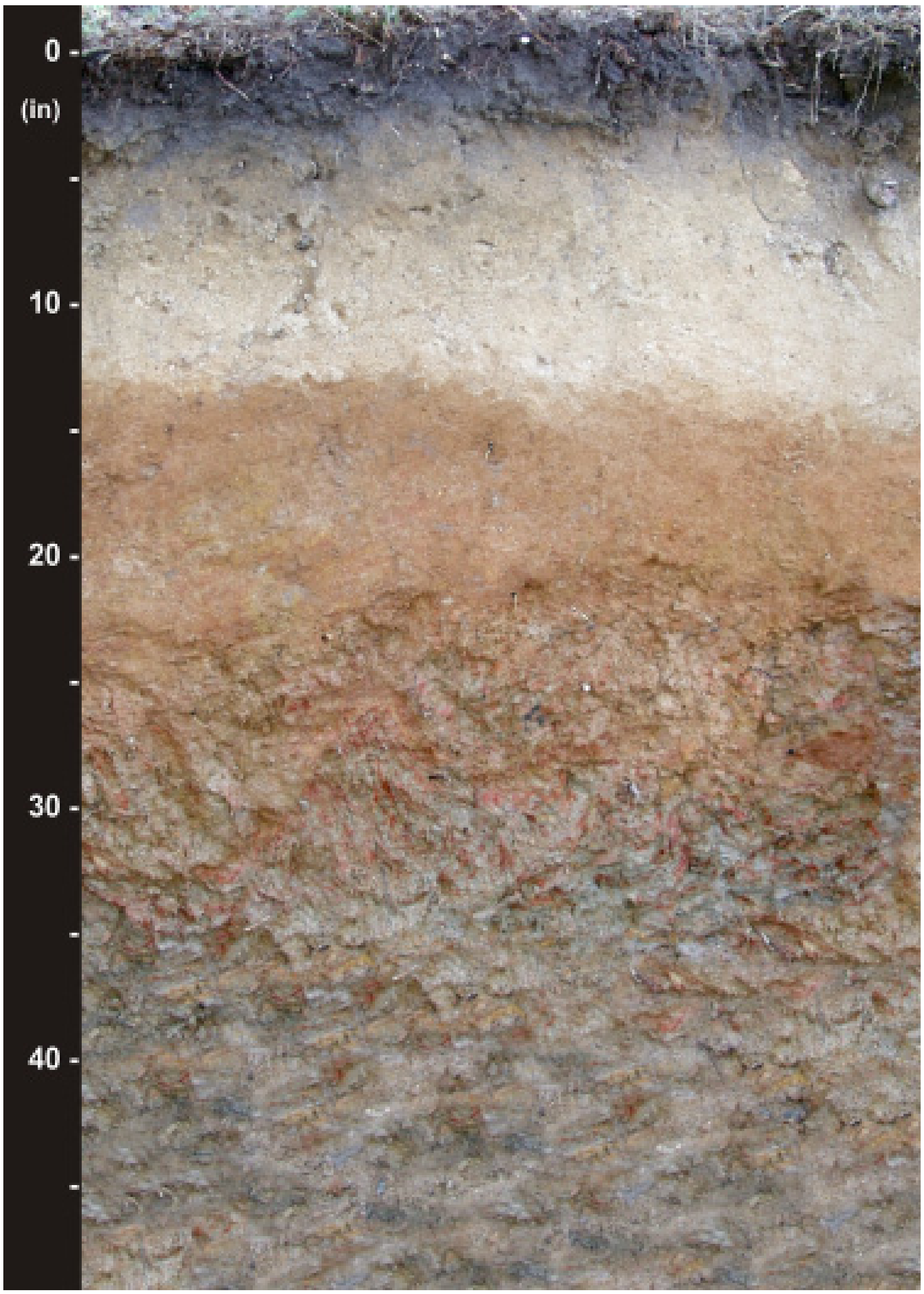


Figure 5—Profile of a soil in the Gritney series.

films on faces of peds; common medium prominent red (2.5YR 4/8) masses of oxidized iron; common medium distinct light brownish gray (10YR 6/2) iron depletions; very strongly acid; clear wavy boundary.

Bt3—37 to 49 inches; 30 percent yellowish brown (10YR 5/6), 30 percent strong brown (7.5YR 5/6), 20 percent red (2.5YR 4/8), and 20 percent light brownish gray (10YR 6/2) clay; weak coarse subangular blocky structure; firm; sticky and plastic; few fine roots; few distinct clay films on faces of peds; red areas are masses of oxidized iron; light brownish gray areas are iron depletions; very strongly acid; clear wavy boundary.

BC—49 to 58 inches; 25 percent strong brown (7.5YR 5/6), 25 percent red (2.5YR 4/8), 25 percent light brownish gray (10YR 6/2), and 25 percent yellowish brown (10YR 5/6) sandy clay; weak coarse subangular blocky structure; friable; sticky and slightly plastic; red areas are masses of oxidized iron; light brownish gray areas are iron depletions; very strongly acid; gradual wavy boundary.

C—58 to 70 inches; 30 percent strong brown (7.5YR 5/6), 25 percent red (2.5YR 4/8), 25 percent light brownish gray (10YR 6/2), and 20 percent yellowish brown (10YR 5/6) sandy clay loam; massive; friable; red areas are masses of oxidized iron; light brownish gray areas are iron depletions; very strongly acid.

Range in Characteristics

Thickness of solum: 35 to more than 60 inches
Rock fragment content: 0 to 10 percent; mostly quartz and ironstone gravel
Soil reaction: Extremely acid to strongly acid, except where lime has been applied
Other distinctive features: Silt content less than 30 percent in particle-size control section

Ap or A horizon:
Color—hue of 7.5YR to 2.5Y, value of 2 to 5, and chroma of 2 to 6
Texture—loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam; eroded phases are sandy clay loam or clay loam

E horizon (where present):
Color—hue of l0YR or 2.5Y, value of 5 to 7, and chroma of 3 to 6
Texture—loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam

BE or BA horizon (where present):
Color—hue of 7.5YR or l0YR, value of 4 to 7, and chroma of 4 to 8
Texture—sandy loam or sandy clay loam

Bt horizon (upper part):
Color—hue of 5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8
Texture—clay, clay loam, and sandy clay; thin subhorizons of sandy clay loam in some pedons
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Bt horizon (middle and lower parts):
Color—hue of 5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8; or variegated in shades of gray, brown, red, and yellow
Texture—clay, clay loam, and sandy clay; thin subhorizons of sandy clay loam in some pedons
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

BC or CB horizon (where present):

Color—hue of 5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8; or variegated in shades of gray, brown, red, and yellow

Texture—clay, clay loam, and sandy clay; thin subhorizons of sandy clay loam in some pedons

Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

C or 2C horizon:

Color—variegated in shades of brown, red, gray, and yellow

Texture—sandy clay loam, loam, or clay loam that has lenses, pockets, or strata of loamy sand, sandy loam, or sandy clay; lower part is clay in some pedons

Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Cg or 2Cg horizon (where present):

Color—hue of 10YR or 2.5Y, value of 3 to 7, and chroma of 0 to 2

Texture—sandy clay loam, loam, or clay loam that has lenses, pockets, or strata of loamy sand or sandy loam; clay in some pedons

Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Johns Series

Depth class: Moderately deep to sandy, contrasting materials
Agricultural drainage class: Moderately well drained
Internal free water occurrence: Moderately deep, transitory
Saturated hydraulic conductivity: Moderately high or high
Landscape: Upper Coastal Plain and River Valleys
Landform: Stream terraces
Parent material: Loamy alluvium over sandy alluvium
Slope: 0 to 2 percent
Taxanomic class: Fine-loamy over sandy or sandy-skeletal, siliceous, semiactive, thermic Aquic Hapludults

Typical Pedon

Johns fine sandy loam; in Scotland County, North Carolina, about 4.0 miles north of Maxton on N.C. Highway 71, about 1.0 mile northwest of Sycamore Hill Church, in cultivated field.

Ap—0 to 8 inches; dark gray (10YR 4/1) fine sandy loam; weak medium granular structure; very friable; many fine and medium roots; strongly acid; abrupt wavy boundary.

E—8 to 15 inches; very pale brown (10YR 7/3) loamy sand; weak medium granular structure; very friable; few brittle areas at contact with Bt horizon; strongly acid; clear wavy boundary.

Bt1—15 to 18 inches; light yellowish brown (2.5Y 6/4) sandy clay loam; weak medium subangular blocky structure; friable; few medium faint strong brown (7.5YR 5/8) and brownish yellow (10YR 6/6) masses of oxidized iron; few medium faint light brownish gray (2.5Y 6/2) iron depletions; strongly acid; clear wavy boundary.

Bt2—18 to 32 inches; brownish yellow (10YR 6/8) sandy clay loam; weak medium subangular blocky structure; friable; thin patchy clay films on faces of peds; many medium and coarse distinct strong brown (7.5YR 5/8) masses of oxidized iron;

many medium and coarse distinct gray (10YR 6/1) iron depletions; very strongly acid; gradual smooth boundary.

2Cg—32 to 60 inches; light gray (10YR 7/1) sand; single grain; loose; lenses and pockets of sandy loam and loamy sand; common coarse distinct brownish yellow (10YR 6/8) masses of oxidized iron; very strongly acid.

Range in Characteristics

Depth to lithologic discontinuity (contrasting soil material): 15 to 40 inches
Rock fragment content: 0 to 5 percent in the A, E, and B horizons and 0 to 15 percent in the C horizon
Soil reaction: Very strongly acid to moderately acid
Other distinctive features: Silt content less than 30 percent in particle-size control section

Ap or A horizon:
Color—10YR or 2.5Y, value of 3 to 5, and chroma of 1 to 4; or neutral and has value of 3 to 5
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

E horizon:
Color—10YR or 2.5Y, value of 5 to 7, and chroma of 3 or 4; or neutral and has value of 5 to 7
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

BE horizon (where present):
Color—10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 6; or neutral and has value of 4 to 8
Texture—sandy loam or fine sandy loam

Bt horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 8
Texture—sandy clay loam or sandy loam
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Btg horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture—sandy clay loam or sandy loam
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

BCg horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam; thinly stratified with heavier textures in some pedons
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

2C horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 3 to 8
Texture—coarse sand, sand, loamy coarse sand, or loamy sand; thin lenses of sandy loam or loam in some pedons
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

2Cg horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 1 or 2; or neutral and has value of 4 to 8

Texture—coarse sand, sand, loamy coarse sand, or loamy sand; thin lenses of sandy loam or loam in some pedons
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Johnston Series

Depth class: Very deep
Agricultural drainage class: Very poorly drained
Flooding frequency and duration: Frequent for long periods
Ponding frequency and duration: Frequent for long periods
Internal free water occurrence: Very shallow or shallow, persistent, thick
Saturated hydraulic conductivity: High
Landscape: Upper Coastal Plain and Sandhills
Landform: Flood plains
Parent material: Sandy and loamy alluvium
Slope: 0 to 2 percent
Taxanomic class: Coarse-loamy, siliceous, active, acid, thermic Cumulic Humaquepts

Typical Pedon

Johnston mucky loam; in Scotland County, North Carolina, about 3.0 miles south of Wagram, 50 feet west of Shoe Heel Creek, 1.5 miles north of Lee's pond, 25 feet south of a paved road, in wooded area.

A—0 to 30 inches; black (10YR 2/1) mucky loam; massive; friable; very strongly acid; abrupt smooth boundary.
Cg1—30 to 34 inches; dark gray (10YR 4/1) loamy fine sand; single grain; loose; very strongly acid; abrupt smooth boundary.
Cg2—34 to 60 inches; gray (10YR 5/1) fine sandy loam; lenses and pockets of loamy sand and sand; massive; very friable; dark colored loam in old root channels; very strongly acid.

Range in Characteristics

Soil reaction: Extremely acid to strongly acid
Other distinctive features: A few inches of recent alluvium deposited over dark colored A horizon or thin (less than 8 inches thick) organic layers in some pedons

Oa horizon (where present):
Color—hue of 10YR, value of 2 or 3, and chroma of 1 or 2; hue of 2.5Y, value of 2.5 or 3, and chroma of 1 or 2; or neutral and has value of 2.5 or 3
Texture—muck

A horizon:
Color—hue of 10YR, value of 2 or 3, and chroma of 1 or 2; hue of 2.5Y or 5Y, value of 2.5 or 3, and chroma of 1 or 2; or neutral and has value of 2.5 or 3
Texture—coarse sandy loam, sandy loam, fine sandy loam, or loam; may include the mucky texture modifier
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of gray
Other distinctive features—Content of organic matter in A horizon ranges from 3 to about 20 percent

Cg horizon:
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 0 to 2; or neutral and has value of 4 to 7

Texture—coarse sand, sand, fine sand, loamy coarse sand, loamy sand, loamy fine sand, coarse sandy loam, sandy loam, fine sandy loam, or loam; thin strata of sandy clay loam in some pedons
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of gray

Kalmia Series

Depth class: Moderately deep to sandy, contrasting materials
Agricultural drainage class: Well drained
Internal free water occurrence: Deep or very deep, absent to transitory
Flooding frequency and duration: None or rare
Saturated hydraulic conductivity: Moderately high or high
Landscape: Upper Coastal Plain and River Valleys
Landform: Stream terraces
Parent material: Loamy alluvium over sandy alluvium
Slope: 0 to 2 percent
Taxanomic class: Fine-loamy over sandy or sandy-skeletal, siliceous, semiactive, thermic Typic Hapludults

Typical Pedon

Kalmia loamy sand, in Scotland County, North Carolina, about 4.0 miles north of Maxton on Secondary Road l407, about 0.3 mile east of Laurinburg-Maxton Airbase hangars, in cultivated area.

Ap—0 to 8 inches; grayish brown (10YR 5/2) loamy sand; weak medium granular structure; very friable; non-sticky and non-plastic; few fine roots; strongly acid; abrupt smooth boundary.
E—8 to 12 inches; light yellowish brown (2.5Y 6/4) loamy sand; weak medium granular structure; very friable; non-sticky and non-plastic; few fine roots; strongly acid; clear smooth boundary.
Bt1—12 to 14 inches; brownish yellow (10YR 6/6) sandy loam; weak medium subangular blocky structure; friable; non-sticky and non-plastic; few fine roots; few clay bridges between sand grains; strongly acid; clear wavy boundary.
Bt2—14 to 27 inches; brownish yellow (10YR 6/6) sandy clay loam; weak medium subangular blocky structure; friable; slightly sticky and non-plastic; common fine and medium pores; few thin discontinuous clay films; few fine flakes of mica; 2 percent quartz gravel; strongly acid; gradual wavy boundary.
BC—27 to 32 inches; brownish yellow (10YR 6/6) sandy clay loam; weak fine subangular blocky structure; friable; slightly sticky and non-plastic; few medium distinct strong brown (7.5YR 5/8) masses of oxidized iron; few medium distinct pale brown (10YR 6/3) iron depletions; 3 percent fine quartz gravel; common lenses and pockets of sandy loam and loamy sand; very strongly acid; gradual wavy boundary.
2C—32 to 60 inches; light yellowish brown (10YR 6/4) loamy sand; few streaks of strong brown (7.5YR 5/8) sandy loam; single grain; loose; many medium distinct pale brown (10YR 6/3), very pale brown (10YR 7/3), and light brownish gray (10YR 6/2) iron depletions; 10 percent fine quartz gravel; 10 percent coarse sand pockets at 52 inches; very strongly acid.

Range in Characteristics

Depth to lithologic discontinuity (contrasting soil material): 20 to 40 inches
Rock fragment content: 0 to 15 percent; mostly quartz gravel
Soil reaction: Very strongly acid to moderately acid, except where lime has been applied

Other distinctive features: None to common flakes of mica

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 to 3; or neutral and has value of 4 to 6
Texture—sand, fine sand, loamy sand, loamy fine sand, sandy loam, or fine sandy loam

E horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 2 to 6
Texture (fine-earth fraction)—loamy sand, loamy fine sand, sandy loam, or fine sandy loam

BE horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 3 to 6
Texture (fine-earth fraction)—loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam

Bt horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 4 to 8
Texture—sandy clay loam, loam, or sandy loam

BC or B/C horizon (where present):
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 4 to 8
Texture—sandy clay loam, loam, sandy loam, or fine sandy loam
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown

C horizon (where present):
Color—hue of 10YR, value of 4 to 8, and chroma of 3 or 4
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron or clay depletions in shades of gray

Cg horizon (where present):
Color—hue of 10YR, value of 4 to 8, and chroma of 1 or 2; or neutral and has value of 4 to 8
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron or clay depletions in shades of gray

2C horizon:
Color—hue of 10YR, value of 4 to 8, and chroma of 3 to 8
Texture—coarse sand, sand, loamy coarse sand, loamy sand, or loamy fine sand
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron or clay depletions in shades of gray

2Cg horizon (where present):
Color—hue of 10YR, value of 4 to 8, and chroma of 1 or 2; or neutral and has value of 4 to 8
Texture—coarse sand, sand, loamy coarse sand, loamy sand, or loamy fine sand
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron or clay depletions in shades of gray

Kenansville Series

Depth class: Moderately deep to sandy, contrasting materials
Agricultural drainage class: Moderately well drained

Internal free water occurrence: Deep, common or transitory
Flooding frequency and duration: None or rare
Saturated hydraulic conductivity: Moderately high or high
Landscape: Upper Coastal Plain and River Valleys
Landform: Stream terraces
Parent material: Loamy alluvium over sandy alluvium
Slope: 0 to 4 percent
Taxanomic class: Loamy, siliceous, subactive, thermic Arenic Hapludults

Typical Pedon

Kenansville loamy sand; in Lenoir County, North Carolina, about 11.0 miles northeast of Kinston and 1.2 miles northwest of Grifton, 100 feet northeast of intersection of N.C. Highway 11 and Secondary Road 1704, in cultivated field.

Ap—0 to 8 inches; grayish brown (10YR 5/2) loamy sand; weak medium granular structure; very friable; common fine roots; moderately acid; abrupt smooth boundary.
E—8 to 24 inches; light yellowish brown (10YR 6/4) loamy sand; weak medium granular structure; very friable; few fine roots; moderately acid; gradual wavy boundary.
Bt—24 to 36 inches; yellowish brown (10YR 5/8) sandy loam; weak medium subangular blocky structure; very friable; common fine roots and pores; coated sand grains bridged with clay; very strongly acid; gradual wavy boundary.
BC—36 to 42 inches; yellowish brown (10YR 5/8) loamy sand; weak medium granular structure; very friable; few fine roots and pores; coated sand grains bridged with clay; strongly acid; gradual wavy boundary.
C—42 to 84 inches; very pale brown (10YR 7/3) sand; single grain; loose; few fine distinct strong brown and common medium faint light gray (10YR 7/2) iron depletions; strongly acid.

Range in Characteristics

Thickness of solum: 40 to 60 inches
Soil reaction: Very strongly acid to moderately acid, except where lime has been applied

Ap or A horizon:
Color—hue of 7.5YR to 2.5Y, value of 3 to 6, and chroma of 1 to 4
Texture—loamy sand, loamy fine sand, sand, or fine sand

E horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 3 to 8
Texture—loamy sand, loamy fine sand, sand, or fine sand

BE horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 8, and chroma of 3 to 6
Texture—loamy sandy, loamy fine sand, or sandy loam

Bt horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 4 to 8
Texture—sandy loam or fine sandy loam; thin layers of sandy clay loam in some pedons

BC or B/C horizon (where present):
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 4 to 8
Texture—sand, loamy sand, sandy loam, or fine sandy loam

C horizon:
Color—hue of 7.5YR to 2.5Y, value of 4 to 8, and chroma of 1 to 8
Texture—sand or loamy sand

Lumbee Series

Depth class: Moderately deep to sandy, contrasting materials
Agricultural drainage class: Poorly drained
Internal free water occurrence: Shallow, common
Flooding frequency and duration: Rare
Saturated hydraulic conductivity: Moderately high or high
Landscape: Upper Coastal Plain and River Valleys
Landform: Stream terraces
Parent material: Loamy alluvium over sandy alluvium
Slope: 0 to 2 percent
Taxanomic class: Fine-loamy over sandy or sandy-skeletal, siliceous, subactive, thermic Typic Endoaquults

Typical Pedon

Lumbee fine sandy loam; in Scotland County, North Carolina, about 4.0 miles north of Maxton on Secondary Road 1407, about 0.5 mile east of Laurinburg-Maxton Airbase hangars, 25 feet north of farm road, in wooded area.

A—0 to 6 inches; dark gray (10YR 4/1) fine sandy loam; weak fine granular structure; very friable; many fine and coarse roots; very strongly acid; clear wavy boundary.
Eg—6 to 14 inches; light brownish gray (2.5Y 6/2) loamy sand; weak fine granular structure; very friable; common fine and medium roots; very strongly acid; clear wavy boundary.
Btg1—14 to 30 inches; light gray (10YR 7/1) sandy clay loam; weak medium and coarse subangular blocky structure; few fine and medium pores; few clay films in pores; common fine and medium brownish yellow (10YR 6/6) masses of oxidized iron; 2 percent quartz gravel; very strongly acid; gradual irregular boundary.
Btg2—30 to 36 inches; light gray (10YR 7/1) sandy clay loam; weak medium subangular blocky structure; friable; 2 percent quartz gravel; very strongly acid; gradual irregular boundary.
2Cg—36 to 60 inches; light gray (10YR 7/1) loamy sand; common medium distinct very pale brown (10YR 7/4) and brownish yellow (10YR 6/6) masses of oxidized iron; 10 percent fine quartz gravel; very strongly acid.

Range in Characteristics

Depth to lithologic discontinuity (contrasting soil material): 14 to 40 inches
Soil reaction: Very strongly acid or strongly acid, except where lime has been applied
Rock fragment content: 0 to 15 percent; mostly fine quartz gravel

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 2 to 5, and chroma of 1 to 3; or neutral and has value of 2 to 5
Texture—loamy sand, sandy loam, fine sandy loam, loam, or silt loam

Eg horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture—loamy sand, sandy loam, fine sandy loam, loam, or silt loam
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

EBg or BEg horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture—sandy loam, fine sandy loam, or loam
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Btg horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture—sandy loam, loam, sandy clay loam, or clay loam
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

BCg or CBg horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture—loamy coarse sand, loamy sand, or sandy loam
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Cg horizon (where present):
Color—hue of 10YR to 5Y, value of 4 to 8, and chroma of 1 or 2; or variegated in shades of these colors
Texture—loamy sand or sandy loam
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

2Cg horizon:
Color—hue of 10YR to 5Y, value of 4 to 8, and chroma of 1 or 2; or variegated in shades of these colors
Texture—coarse sand, sand, fine sand, loamy coarse sand, loamy sand, or loamy fine sand; thin lenses of sandy loam, loam, or clay loam below 40 inches in some pedons
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Lynchburg Series

Depth class: Very deep
Agricultural drainage class: Somewhat poorly drained
Internal free water occurrence: Shallow, common
Saturated hydraulic conductivity: Moderately high or high
Landscape: Upper Coastal Plain
Landform: Flats and broad interstream divides
Parent material: Loamy marine deposits
Slope: 0 to 2 percent
Taxanomic class: Fine-loamy, siliceous, semiactive, thermic Aeric Paleaquults

Typical Pedon

Lynchburg loamy fine sand; in Colleton County, South Carolina, about 3,000 feet southwest of junction of U.S. Highway 21 and Seaboard Coastline Railroad in Ruffin, 4.0 miles southwest of junction of U.S. Highway 21 and S.C. Secondary Road 272, about 100 feet north of U.S. Highway 21, in cultivated area.

Ap—0 to 6 inches; very dark gray (10YR 3/1) loamy fine sand; weak medium granular structure; very friable; common fine and few medium roots; very strongly acid; clear smooth boundary.

E—6 to 10 inches; light olive brown (2.5Y 5/4) loamy fine sand; weak medium subangular blocky structure; very friable; common fine roots; few fine pores; common medium distinct dark gray (10YR 4/1) iron depletions; very strongly acid; clear smooth boundary.

Bt—10 to 17 inches; light olive brown (2.5Y 5/4) sandy clay loam; weak medium subangular blocky structure; friable; common fine roots; few fine pores; few faint clay films on faces of some peds; many medium distinct yellowish brown (10YR 5/6) and few fine medium prominent red (2.5YR 4/8) masses of oxidized iron; common medium distinct light brownish gray (2.5Y 6/2) iron depletions; very strongly acid; clear wavy boundary.

Btg1—17 to 30 inches; light brownish gray (2.5Y 6/2) sandy clay loam; weak medium subangular blocky structure; friable; few fine roots; few fine pores; common faint clay films on faces of some peds; many medium prominent yellowish brown (10YR 5/6) and common medium prominent red (2.5YR 4/6) masses of oxidized iron; very strongly acid; gradual smooth boundary.

Btg2—30 to 65 inches; gray (10YR 6/1) sandy clay loam; weak medium subangular blocky structure; friable; few fine roots; common faint clay films on faces of peds; many medium prominent yellowish brown and many medium prominent red (2.5YR 4/8) masses of oxidized iron; very strongly acid; gradual smooth boundary.

Btg3—65 to 80 inches; gray (10YR 5/1) clay; weak medium subangular structure; firm; few fine roots; few faint clay films on faces of peds; many medium prominent strong brown (7.5YR 5/8) and few fine prominent red (2.5YR) masses of oxidized iron; few medium faint greenish gray (5BG 6/1) iron depletions; very strongly acid.

Range in Characteristics

Soil reaction: Extremely acid to strongly acid, except where lime has been applied
Rock fragment content: 0 to 10 percent
Other distinctive features: Less than 30 percent silt in particle-size control section

Ap or A horizon:

Color—hue of 10YR or 2.5Y, value of 2 to 5, and chroma of 1 or 2; or neutral and has value of 2 to 5

Texture—sand, fine sand, loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam

E horizon:

Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 to 4

Texture—sand, fine sand, loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam

Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Bt horizon:

Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 3 to 8

Texture—typically sandy clay loam, but may be sandy loam, fine sandy loam, loam, or clay loam; less than 30 percent silt in particle-size control section

Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Btg horizon:

Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2; or neutral and has value of 4 to 7

Texture—sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam; sandy clay or clay at a depth of 40 inches or more in some pedons

Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

BCg horizon:
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2; or neutral and has value of 4 to 7
Texture—sandy loam, fine sandy loam, loam, sandy clay loam, clay loam, sandy clay, or clay
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Mantachie Series

Depth class: Very deep
Agricultural drainage class: Somewhat poorly drained
Internal free water occurrence: Shallow or moderately deep, persistent, thick
Flooding: Rare
Saturated hydraulic conductivity: Moderately high or high
Landscape: Upper Coastal Plain and Sandhills
Landform: Flood plains
Parent material: Loamy alluvium
Slope: 0 to 2 percent
Taxanomic class: Fine-loamy, siliceous, active, acid, thermic Fluventic Endoaquepts

Typical Pedon

Mantachie loam; in Lee County, Mississippi, about 14.0 miles northeast of Tupelo, 350 feet south of gravel road, 505 feet west and 330 feet south of northeast corner of sec. 1, T. 9 S., R. 6 E., in cultivated field.

Ap—0 to 5 inches; dark grayish brown (10YR 4/2) loam; weak fine granular structure; friable; common fine roots; few fine concretions of iron and manganese oxides; common fine distinct dark yellowish brown (10YR 4/4) masses of oxidized iron; slightly acid; abrupt smooth boundary.

A—5 to 11 inches; brown (10YR 4/3) fine sandy loam; weak fine granular structure; friable; few fine roots; few fine concretions of iron and manganese oxides; many fine and medium distinct light yellowish brown (10YR 6/4) masses of oxidized iron; many fine and medium faint grayish brown (10YR 5/2) iron depletions; very strongly acid; clear wavy boundary.

Bw1—11 to 15 inches; 40 percent grayish brown (10YR 5/2), 30 percent brown (10YR 4/3), and 30 percent dark yellowish brown (10YR 4/4) loam; weak fine subangular blocky structure; friable; few fine roots; few fine concretions of iron and manganese oxides; areas of dark yellowish brown are masses of oxidized iron; areas of grayish brown are iron depletions; very strongly acid; clear wavy boundary.

Bw2—15 to 19 inches; 60 percent strong brown (7.5YR 5/6) and 40 percent gray (10YR 5/1) loam; weak medium subangular blocky structure; friable; few fine roots; areas of strong brown are masses of oxidized iron; areas of gray are iron depletions; very strongly acid; gradual wavy boundary.

Bg1—19 to 29 inches; gray (10YR 6/1) loam; weak medium subangular blocky structure; friable; few fine roots; many medium prominent strong brown (7.5YR 5/6) masses of oxidized iron; very strongly acid; gradual wavy boundary.

Bg2—29 to 48 inches; gray (10YR 5/1) loam; weak medium subangular blocky structure; friable; few fine roots; many medium prominent strong brown (7.5YR 5/6)

and few fine prominent yellowish red (5YR 5/6) masses of oxidized iron; very strongly acid; gradual wavy boundary.

Bg3—48 to 61 inches; gray (10YR 6/1) loam; weak coarse subangular blocky structure; friable; few fine and medium concretions of iron and manganese oxides; many fine and medium prominent strong brown (7.5YR 5/6) and yellowish red (5YR 5/6) masses of oxidized iron; very strongly acid.

Range in Characteristics

Thickness of solum: 30 to more than 60 inches
Soil reaction: Very strongly acid or strongly acid, except where lime has been applied
Rock fragment content: 0 to 10 percent; mostly quartz gravel
Other distinctive features: None to common concretions and soft masses of iron and manganese oxides; buried horizons that have colors and textures similar to those of the Bw or Bg horizons below a depth of 40 inches in many pedons

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 to 4; or variegated in shades of brown and gray with no dominant matrix color
Texture—clay loam, fine sandy loam, loam, sandy loam, or silt loam

Bw horizon:
Color—commonly variegated in shades of gray, brown, red, and yellow; or has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 3 to 8
Texture—clay loam, sandy clay loam, or loam
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Bg horizon:

Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2
Texture—clay loam, sandy clay loam or loam
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Cg or C horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2
Texture—clay loam, sandy clay loam, loam, or sandy loam; thin strata of finer or coarser textured material in many pedons
Redoximorphic features—few to many masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Maxton Series

Depth class: Moderately deep to sandy, contrasting materials
Agricultural drainage class: Well drained
Internal free water occurrence: Very deep
Saturated hydraulic conductivity: Moderately high or high
Landscape: Upper Coastal Plain and River Valleys
Landform: Stream terraces
Parent material: Loamy alluvium over sandy alluvium
Slope: 0 to 2 percent
Taxanomic class: Fine-loamy over sandy or sandy-skeletal, siliceous, subactive, thermic Typic Hapludults

Typical Pedon

Maxton loamy sand; in Scotland County, North Carolina, about 3.0 miles north of Maxton on N.C. Highway 71, about 50 feet northwest of Sycamore Hill Cemetery, in cultivated field.

Ap—0 to 8 inches; grayish brown (10YR 5/2) loamy sand; weak medium granular structure; very friable; few fine roots; moderately acid; clear wavy boundary.

E—8 to 12 inches; pale brown (10YR 6/3) loamy sand; weak medium granular structure; very friable; few slightly brittle bodies; few fine roots; strongly acid; clear wavy boundary.

BE—12 to 15 inches; brown (7.5YR 5/4) sandy clay loam; weak medium subangular blocky structure; friable; few fine roots; strongly acid; clear wavy boundary.

Bt—15 to 30 inches; yellowish red (5YR 4/6) sandy clay loam; moderate medium subangular blocky structure; friable; sticky; few fine roots; common clay films on faces of peds; few fine flakes of mica; strongly acid; gradual smooth boundary.

BC—30 to 33 inches; yellowish red (5YR 5/6) sandy loam; weak medium subangular blocky structure; friable; few fine roots; strongly acid; gradual smooth boundary.

2C—33 to 60 inches; reddish yellow (7.5YR 6/6) sand; few coarse distinct strong brown (7.5YR 5/6) mottles that are sandy loam; massive; loose; few small rounded quartz gravel; sand becomes lighter in color and coarser with depth; small gravel increase in abundance with depth; strongly acid.

Range in Characteristics

Thickness of solum: 20 to 40 inches
Rock fragment content: 0 to 10 percent throughout
Soil reaction: Very strongly acid or strongly acid, except where lime has been applied
Other distinctive features: None or few flakes of mica

Ap or A horizon:
Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 1 to 4
Texture—loamy sand, sandy loam, or fine sandy loam

E horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 or 4
Texture—loamy sand, sandy loam, or fine sandy loam

BE horizon:
Color—hue of 5YR to 10YR, value of 4 to 7, and chroma of 2 to 8
Texture—sandy loam, fine sandy loam, or sandy clay loam

Bt horizon:
Color—hue of 2.5YR or 5YR, value of 4 to 6, and chroma of 3 to 8
Texture—sandy clay loam or sandy loam; content of silt less than 20 percent

BC horizon:
Color—hue of 2.5YR or 5YR, value of 4 to 6, and chroma of 3 to 8
Texture—sandy loam or sandy clay loam; considerably less clay than the Bt horizon

2C horizon:
Color—hue of 5YR to 2.5Y, value of 5 to 8, and chroma of 3 to 8
Texture (fine-earth fraction)—stratified loamy sand, sand, or coarse sand

McColl Series

Depth class: Moderately deep to fragic soil properties
Agricultural drainage class: Poorly drained

Ponding frequency and duration: Frequent for long periods
Internal free water occurrence: Very shallow or shallow, common to persistent
Saturated hydraulic conductivity: Moderately low
Landscape: Upper Coastal Plain
Landform: Flats, Carolina bays, and depressions
Parent material: Clayey marine deposits
Slope: 0 to 1 percent
Taxanomic class: Fine, kaolinitic, thermic Typic Fragiaquults

Typical Pedon

McColl loam; in Sumter County, South Carolina, about 2.0 miles west on County Road 33 from S.C. Highway 120, about 700 feet northwest of road, 50 feet north of fence, 50 feet southwest of drainage ditch, in cultivated area.

Ap—0 to 6 inches; very dark gray (10YR 3/1) loam; weak fine granular structure; very friable; many fine roots; medium acid; abrupt wavy boundary.

Btg1—6 to 9 inches; dark grayish brown (10YR 4/2) sandy clay loam; weak fine subangular blocky structure; friable; common fine roots; strong brown stains lining old root channels; few fine pores; strongly acid; clear smooth boundary.

Btg2—9 to 13 inches; light brownish gray (2.5Y 6/2) clay; weak fine subangular blocky structure; firm; sticky; common fine roots; strong brown stains lining old root channels; common fine pores; few distinct clay films; very strongly acid; clear irregular boundary.

Btg/Bx—13 to 23 inches; 60 percent light brownish gray (2.5Y 6/2) clay; weak medium subangular blocky structure; firm; sticky; common fine roots; common fine pores; few distinct clay films (Btg part); 40 percent strong brown (7.5YR 5/6) sandy clay loam; strong coarse prismatic structure that is about 1 inch in diameter at the top and about 3 inches at the bottom; prisms part horizontally to coarse platy structure; firm; brittle; common fine and medium pores with the larger pores coated or filled with gray clay (Bx part); few medium prominent red (2.5YR 4/8) masses of oxidized iron; sharp boundary between gray clay and strong brown sandy clay loam; strongly acid; clear irregular boundary.

Btx—23 to 42 inches; 80 percent strong brown (7.5YR 5/6) sandy clay loam; moderate coarse prismatic structure parting to strong coarse platy; firm; brittle; many fine and medium pores; some pores coated or filled with gray clay; common medium prominent red (2.5YR 4/8) masses of oxidized iron; 20 percent vertical streaks of light gray (10YR 7/1) clay; weak medium subangular blocky structure; firm; moderately sticky and slightly plastic; common fine roots in upper part and few fine roots in lower part; very strongly acid; gradual wavy boundary.

BC1—42 to 63 inches; strong brown (7.5YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; firm in place; moderately sticky and slightly plastic; common fine prominent red (2.5YR 4/6) masses of oxidized iron; common medium prominent pale brown (10YR 6/3) iron depletions and many medium and coarse prominent light gray (10YR 7/1) iron depletions that are massive clay; strongly acid; gradual wavy boundary.

BC2—63 to 75 inches; strong brown (7.5YR 5/6) sandy loam; massive; friable; red (2.5YR 4/6) masses of oxidized iron; common medium prominent pale brown (10YR 6/3) iron depletions and many medium and coarse prominent light gray (10YR 7/1) iron depletions that are sandy clay loam; strongly acid; gradual wavy boundary.

Cg—75 to 80 inches; light gray (10YR 7/1) sandy loam; massive; very friable; many coarse prominent yellow (10YR 7/6) masses of oxidized iron; strongly acid.

Range in Characteristics

Thickness of solum: 60 to more than 72 inches
Depth to fragic soil properties: 12 to 36 inches
*Depth to fragipan:*15 to 40 inches
Rock fragment content: 0 to 20 percent; mostly ironstone concretions
Soil reaction: Extremely acid to moderately acid, except where lime has been applied
Plinthite content: Less than 5 percent

Ap or A horizon:
Color—hue of 10YR, value of 2 to 4, and chroma of 1 or 2
Texture—loam, sandy loam, fine sandy loam, sandy clay loam or clay loam

Eg horizon (where present):
Color—hue of 10YR, value of 6 or 7, and chroma of 1 or 2
Texture—sandy loam, fine sandy loam, or loam

Btg or B´tg horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2; or neutral and has value of 4 to 7
Texture—sandy clay loam in the upper part; or clay loam, sandy clay, or clay
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray
Other distinctive features—clear or abrupt lower boundary with tongues of the Btg horizon that taper with depth and extend into the Btx horizon

Btx horizon:
Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 4 to 8
Texture—sandy clay loam, clay loam, or sandy clay
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray
Other distinctive features—moderate to strong coarse prismatic structure parting to platy or blocky

BC horizon:
Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 4 to 8
Texture—sandy clay loam, or sandy loam; pockets of gray coarser or finer textured material in most pedons
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

BCg horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2; or neutral and has value of 4 to 7
Texture—sandy clay loam or sandy loam; pockets of gray coarser or finer textured material in most pedons

Cg horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2; or neutral and has value of 4 to 8
Texture—sandy loam, sandy clay loam, or sandy clay; pockets of coarser or finer textured material in some pedons
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown; combination of masses of oxidized iron and iron depletions in shades of gray, yellow, brown, and red in some pedons

Noboco Series

Depth class: Very deep
Agricultural drainage class: Moderately well drained or well drained
Internal free water occurrence: Moderately deep, common or transitory
Saturated hydraulic conductivity: Moderately high
Landscape: Upper Coastal Plain
Landform: Ridges, side slopes, flats, and broad interstream divides
Parent material: Loamy marine deposits
Slope: 0 to 6 percent
Taxanomic class: Fine-loamy, siliceous, subactive, thermic Oxyaquic Paleudults

Typical Pedon

Noboco loamy sand, 0 to 2 percent slopes; in Lee County, South Carolina, about 1.75 miles southwest of St. Charles on Darlington Highway from intersection with St. Charles Road, 100 feet south of centerline of Darlington Highway, in cultivated area.

Ap—0 to 10 inches; dark grayish brown (10YR 4/2) loamy sand; weak medium granular structure; very friable; common fine and medium roots; moderately acid; abrupt smooth boundary.
E—10 to 13 inches; pale brown (10YR 6/3) loamy sand; single grain; loose; very friable; few fine roots; moderately acid; clear wavy boundary.
Bt1—13 to 25 inches; yellowish brown (10YR 5/4) sandy clay loam; moderate medium subangular blocky structure; friable; common distinct clay films on faces of peds; very strongly acid; gradual smooth boundary.
Bt2—25 to 34 inches; yellowish brown (10YR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; common distinct clay films on faces of peds; common medium distinct strong brown (7.5YR 5/8) masses of oxidized iron; extremely acid; gradual smooth boundary.
Bt3—34 to 58 inches; yellowish brown (10YR 5/8) sandy clay loam; moderate medium subangular blocky structure; friable; common distinct clay films on faces of peds; common medium distinct strong brown (7.5YR 5/8) masses of oxidized iron; common medium prominent gray (10YR 6/1) iron depletions; extremely acid; gradual smooth boundary.
Bt4—58 to 80 inches; yellowish brown (10YR 5/8) sandy clay loam; moderate medium subangular blocky structure; friable; common distinct clay films on faces of peds; common coarse prominent red (2.5YR 5/6) masses of oxidized iron; common coarse prominent gray (10YR 6/1) iron depletions; extremely acid.

Range in Characteristics

Depth to base of argillic horizon: 60 to more than 80 inches
Rock fragment content: 0 to 5 percent; mostly fine ironstone nodules
Soil reaction: Extremely acid to strongly acid, except where lime has been applied
Plinthite content: 0 to 4 percent in the Bt horizon above a depth of 60 inches and 0 to 10 percent or more below a depth of 60 inches

Ap or A horizon:
Color—hue of 10YR, value of 3 to 7, and chroma of 1 to 4
Texture—sand, loamy sand, loamy fine sand, fine sand, fine sandy loam, or sandy loam

E horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 2 to 8
Texture—sand, loamy sand, loamy fine sand, fine sand, fine sandy loam, or sandy loam

Bt horizon (upper part):
Color—hue of 7.5YR to 2.5Y, value of 3 to 6, and chroma of 3 to 8
Texture—sandy loam, fine sandy loam, sandy clay loam, or clay loam
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray at a depth of 30 to 40 inches

Bt horizon (lower part):
Color—hue of 7.5YR to 2.5Y, value of 3 to 6, and chroma of 3 to 8; or variegated in shades of these colors
Texture—sandy loam, fine sandy loam, sandy clay loam, or clay loam; thin layers of sandy clay below a depth of 40 inches in some pedons
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Btg horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2
Texture—sandy loam, sandy clay loam, clay loam, sandy clay, or clay
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron or clay depletions in shades of brown, yellow, olive, and gray

Norfolk Series

Depth class: Very deep
Agricultural drainage class: Well drained
Internal free water occurrence: Deep or very deep, transitory
Saturated hydraulic conductivity: Moderately high
Landscape: Upper Coastal Plain
Landform: Ridges, side slopes, flats, and broad interstream divides
Parent material: Loamy marine deposits
Slope: 0 to 6 percent
Taxonomic class: Fine-loamy, kaolinitic, thermic Typic Kandiudults (fig. 6)

Typical Pedon

Norfolk loamy sand; in Robeson County, North Carolina, about 1.25 miles south of Parkton, 300 feet west of Secondary Road 1724, 60 feet south of farm road, in cultivated area.

Ap—0 to 9 inches; grayish brown (10YR 5/2) loamy sand; weak fine and medium granular structure; very friable; non-sticky and non-plastic; few fine and medium roots; darker colored material in old root channels; strongly acid; clear smooth boundary.

E—9 to 14 inches; light yellowish brown (10YR 6/4) loamy sand; weak medium granular structure; very friable; non-sticky and non-plastic; few fine and medium roots; darker colored material in old root channels; strongly acid; clear smooth boundary.

Bt1—14 to 17 inches; yellowish brown (10YR 5/6) sandy loam; weak medium subangular blocky structure; friable; slightly sticky and slightly plastic; few fine and medium roots; few faint clay films on faces of peds; strongly acid; clear wavy boundary.

Bt2—17 to 38 inches; yellowish brown (10YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; slightly sticky and slightly plastic; many fine and medium pores; few faint clay films on faces of peds; strongly acid; gradual wavy boundary.

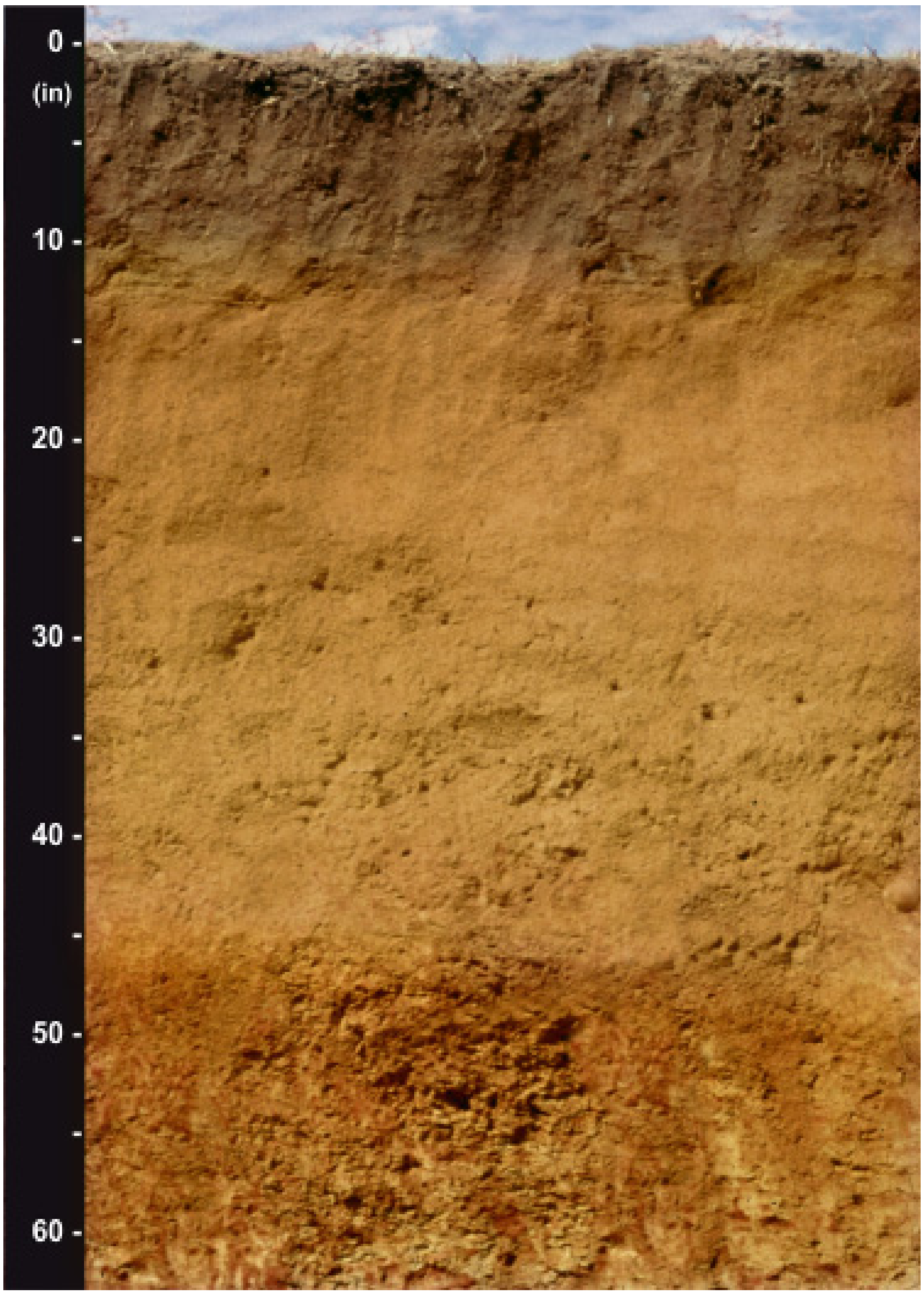


Figure 6—Profile of a soil in the Norfolk series.

Bt3—38 to 58 inches; yellowish brown (10YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; slightly sticky and slightly plastic; few faint clay films on faces of peds; few fine faint strong brown (7.5YR 4/6) and few prominent yellowish red (5YR 5/8) masses of oxidized iron; few fine distinct pale brown (10YR 6/3) iron depletions; strongly acid; gradual wavy boundary.

Bt4—58 to 70 inches; yellowish brown (10YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; slightly sticky and slightly plastic; few faint clay films on faces of peds; common medium distinct yellowish red (5YR 5/8) masses of oxidized iron; common medium distinct pale brown (10YR 6/3) and light brownish gray (10YR 6/2) iron depletions; 1 percent firm yellowish red plinthite nodules; strongly acid; gradual wavy boundary.

BC—70 to 82 inches; variegated brownish yellow (10YR 6/6), strong brown (7.5YR 5/6), and yellowish red (5YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; slightly sticky and slightly plastic; 5 percent firm, brittle plinthite nodules; strongly acid; gradual wavy boundary.

C—82 to 100 inches; variegated red (2.5YR 4/8), strong brown (7.5YR 5/8), brownish yellow (10YR 6/8), and gray (10YR 5/1) sandy clay loam; massive; friable; slightly sticky and slightly plastic; strongly acid.

Range in Characteristics

Depth to base of argillic horizon: 60 to more than 80 inches
Soil reaction: Extremely acid to strongly acid, except where lime has been applied
Rock fragment content: 0 to 5 percent; mostly quartz gravel or ironstone nodules
Plinthite content: 0 to 4 percent to a depth of 60 inches and 0 to 10 percent or more below a depth of 60 inches

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 to 4
Texture—loamy sand, sandy loam, fine sandy loam, or loamy fine sand; fine sand or sand in some pedons

E horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 2 to 6
Texture—loamy sand, sandy loam, fine sandy loam, or loamy fine sand; fine sand or sand in some pedons

BE horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 3 to 8
Texture—sandy loam or fine sandy loam

Bt horizon (upper part):
Color—hue of 7.5YR to 2.5Y, value of 5 to 8, and chroma of 3 to 8
Texture—sandy loam, fine sandy loam, sandy clay loam, or clay loam
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, and olive

Bt horizon (lower part):
Color—hue of 7.5YR to 2.5Y, value of 5 to 8, and chroma of 3 to 8
Texture—sandy loam, fine sandy loam, sandy clay loam, clay loam, sandy clay, or clay
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

BC or BCt horizon (where present):
Color—hue of 5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8; or variegated in shades of these colors

Texture—sandy loam, fine sandy loam, sandy clay loam, clay loam, sandy clay, or clay
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

C horizon:
Color—hue of 2.5YR to 5Y, value of 4 to 8, and chroma of 3 to 8; or variegated in shades of these colors
Texture—loamy coarse sand, loamy sand, loamy fine sand, coarse sandy loam, sandy loam, fine sandy loam, sandy clay loam, clay loam, or sandy clay; layers of coarser or finer textured materials in some pedons
Redoximorphic features—masses of oxidized in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Ocilla Series

Depth class: Very deep
Agricultural drainage class: Somewhat poorly drained
Internal free water occurrence: Shallow or moderately deep, common
Saturated hydraulic conductivity: Moderately high or high
Landscape: Upper Coastal Plain and Sandhills
Landform: Low uplands and stream terraces
Parent material: Sandy and loamy marine deposits
Slope: 0 to 2 percent
Taxanomic class: Loamy, siliceous, semiactive, thermic Aquic Arenic Paleudults

Typical Pedon

Ocilla loamy sand; in Irwin County, Georgia, about 2.6 miles east of Irwinville on Georgia Highway 32, about 2.0 miles north on county road, in wooded area.

A—0 to 4 inches; very dark gray (10YR 3/1) loamy sand; weak medium granular structure; very friable; many fine roots; strongly acid; clear wavy boundary.
E1—4 to 15 inches; light brownish gray (2.5Y 6/2) loamy sand; single grain; very friable; common fine and medium roots; common root holes filled with very dark gray loamy sand; common clean sand grains; strongly acid; clear irregular boundary.
E2—15 to 28 inches; pale brown (10YR 6/3) loamy sand; weak medium granular structure; very friable; few fine roots; many medium distinct brownish yellow (10YR 6/6) soft masses of oxidized iron; strongly acid; gradual wavy boundary.
Bt1—28 to 49 inches; brownish yellow (10YR 6/6) sandy loam; common medium pockets of sandy clay loam; weak medium subangular blocky structure; very friable; coated sand grains bridged with clay; common medium prominent light gray (10YR 7/1) iron depletions; very strongly acid; gradual wavy boundary.
Bt2—49 to 59 inches; brownish yellow (10YR 6/6) sandy clay loam that has many large pockets of light gray (10YR 7/1) sandy loam; weak medium subangular blocky structure; friable; coated sand grains bridged with clay; common medium prominent yellowish red (5YR 4/8) soft masses of oxidized iron; very strongly acid; gradual irregular boundary.
Bt3—59 to 67 inches; variegated strong brown (7.5YR 5/6) and yellowish red (5YR 4/8) sandy clay loam; common medium pockets of light gray (10YR 7/1) sandy loam; weak coarse angular blocky structure; friable; about 2 percent plinthite; very strongly acid.

Range in Characteristics

Thickness of solum: 60 to more than 80 inches
Rock fragment content: 0 to 5 percent in the A and E horizons; mostly ironstone gravel
Soil reaction: Very strongly acid or strongly acid, except where lime has been applied
Plinthite content: 0 to 3 percent in the Bt horizon

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 or 2; or neutral and has value of 3 to 5
Texture—sand, fine sand, loamy coarse sand, loamy sand, or loamy fine sand

E horizon:
Color—hue of 10YR to 5Y, value of 4 to 8, and chroma of 1 to 4
Texture—sand, fine sand, loamy coarse sand, loamy fine sand, or loamy sand

BE horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 8
Texture—loamy sand or loamy fine sand

Bt horizon (upper part):
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 2 to 8
Texture—fine sandy loam, sandy loam, or sandy clay loam

Bt horizon (lower part) or Btg horizon (where present):
Color—variegated in shades of gray, yellow, brown, and red; hue of 10YR to 5Y, value of 5 to 8, and chroma of 1 to 8; or neutral and has value of 7
Texture—dominantly sandy clay loam, but may be coarse sandy loam, sandy loam, fine sandy loam, and sandy clay; pockets of sandy loam or fine sandy loam in some subhorizons
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron or clay depletions in shades of brown, yellow, olive, and gray

C horizon (where present):
Color—variegated in shades of gray, yellow, brown, and red; hue of 10YR to 5Y, value of 5 to 8, and chroma of 1 to 8; or neutral and has value of 7
Texture—sandy loam, sandy clay loam, sandy clay, or clay
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron or clay depletions in shades of brown, yellow, olive, and gray

Osier Series

Depth class: Very deep
Agricultural drainage class: Poorly drained
Internal free water occurrence: Very shallow or shallow, persistent, thick
Flooding: None or rare
Saturated hydraulic conductivity: High or very high
Landscape: Upper Coastal Plain and Sandhills
Landform: Upland depressions, drainageways, and flats
Parent material: Sandy alluvium
Slope: 0 to 2 percent
Taxanomic class: Siliceous, thermic Typic Psammaquents

Typical Pedon

Osier loamy fine sand; in Irwin County, Georgia, about 4.0 miles south of Ocilla, Georgia, on U.S. Highway 129, about 2.3 miles southwest on county road, 250 feet east of road, in wooded bottom area.

A1—0 to 3 inches; very dark grayish brown (10YR 3/2) loamy fine sand; moderate fine granular structure; very friable; many fine and coarse roots; very strongly acid; abrupt wavy boundary.
A2—3 to 8 inches; mixed dark gray (10YR 4/1) and grayish brown (2.5Y 5/2) loamy sand; weak medium granular structure; very friable; common fine and coarse roots; thin strata of sand; very strongly acid; clear wavy boundary.
Cg1—8 to 16 inches; dark gray (10YR 4/1) loamy sand; weak fine granular structure; very friable; common fine roots; thin strata of gray (10YR 6/1) sand; very strongly acid; gradual wavy boundary.
Cg2—16 to 36 inches; gray (10YR 6/1) sand; single grain; loose; few fine roots; few fine distinct yellowish brown (10YR 5/6) masses of oxidized iron; very strongly acid; gradual wavy boundary.
Cg3—36 to 48 inches; light brownish gray (2.5Y 6/2) sand; single grain; loose; few fine roots; common coarse distinct brownish yellow (10YR 6/6) masses of oxidized iron; very strongly acid; gradual wavy boundary.
Cg4—48 to 60 inches; light gray (2.5Y 7/2) coarse sand; single grain; loose; few fine distinct yellowish brown (10YR 5/6) masses of oxidized iron; common medium faint light brownish gray (2.5Y 6/2) iron depletions; very strongly acid; gradual wavy boundary.
Cg5—60 to 75 inches; dark gray (10YR 4/1) coarse sand; single grain; loose; many coarse faint light brownish gray (10YR 6/2) iron depletions; very strongly acid.

Range in Characteristics

Thickness of sand: 80 inches or more
Soil reaction: Extremely acid to moderately acid
Other distinctive features: 5 to 15 percent silt and clay in the 10 to 40 inch zone

A horizon:
Color—hue of 10YR or 2.5Y, value of 2 to 5, and chroma of 1 or 2
Texture—fine sandy loam, loamy fine sand, loamy sand, fine sand, or sand

Cg horizon:
Color—hue of 5GY to 7.5YR, value of 3 to 8, and chroma of 1 or 2; or neutral and has value of 5 to 7
Texture—loamy fine sand, loamy sand, fine sand, and sand; lower Cg horizons may have coarse sand; thin strata of material ranging from sand to sandy loam in most pedons
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Ab horizon (where present):
Color—hue of 10YR to 5Y, value of 2 or 3, and chroma of 1 or 2
Texture—fine sand, loamy fine sand, or loamy sand

Pactolus Series

Depth class: Very deep
Agricultural drainage class: Moderately well drained or somewhat poorly drained
Internal free water occurrence: Moderately deep to very deep, common, thin
Saturated hydraulic conductivity: High or very high
Landscape: Upper Coastal Plain and Sandhills
Landform: Low ridges on marine and stream terraces
Parent material: Sandy marine deposits and eolian sands

Slope: 0 to 2 percent
Taxanomic class: Thermic, coated Aquic Quartzipsamments

Typical Pedon

Pactolus loamy sand; in Pitt County, North Carolina, about 4.0 miles north of Grimesland on Secondary Road 1566, about 350 feet north of intersection of Secondary Road 1564, 80 feet northeast of barn, 10 feet east of path, in cultivated area.

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) loamy sand; weak fine granular structure; very friable; common fine roots; moderately acid; clear wavy boundary.
C1—8 to 15 inches; light yellowish brown (10YR 6/4) loamy sand; single grain; very friable; few fine roots; moderately acid; clear wavy boundary.
C2—15 to 25 inches; brownish yellow (10YR 6/6) loamy sand; single grain; very friable; few fine roots; very strongly acid; gradual wavy boundary.
C3—25 to 40 inches; light yellowish brown (10YR 6/4) loamy sand; single grain; very friable; few fine roots; common medium distinct light gray (10YR 7/1) iron depletions; strongly acid; gradual wavy boundary.
Cg—40 to 80 inches; light gray (10YR 7/1) loamy sand; single grain; very friable; common medium distinct brownish yellow (10YR 6/6) soft masses of oxidized iron; very strongly acid.

Range in Characteristics

Thickness of sandy horizons: 80 inches or more; 10 to 25 percent fines in 10- to 40-inch control section
Soil reaction: Extremely acid to strongly acid, except where lime has been applied

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 6, and chroma of 1 to 4
Texture—loamy sand, loamy fine sand, sand, or fine sand

C horizon (upper part):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 8
Texture—sand, loamy sand, fine sand, coarse sand, or loamy fine sand

C horizon (lower part):
Color—10YR or 2.5Y, value of 5 to 8, and chroma of 3 or 4
Texture—sand, loamy sand, fine sand, coarse sand, or loamy fine sand
Redoximorphic features (where present)—masses of oxidized iron in shades of yellow, brown, and red and iron depletions with chroma 0 to 2 within a depth of 20 inches
Other distinctive features—clean sand grains in lower part of C horizon in most pedons

Cg horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture—sand, loamy sand, fine sand, coarse sand, or loamy fine sand
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Pamlico Series

Depth class: Very deep
Agricultural drainage class: Very poorly drained
Flooding frequency and duration: Frequent for very long periods

Ponding frequency and duration: Frequent for very long periods
Internal free water occurrence: Very shallow or shallow, persistent, thick
Saturated hydraulic conductivity: High
Landscape: Upper Coastal Plain and Sandhills
Landform: Flood plains
Parent material: Organic material over sandy sediment
Slope: 0 to 1 percent
Taxanomic class: Sandy or sandy-skeletal, siliceous, dysic, thermic Terric Haplosaprists

Typical Pedon

Pamlico muck, undrained; in Wayne County, North Carolina, about 8.0 miles east of Mt. Olive on North Carolina Highway 55, about 0.6 mile south of intersection with Secondary Road 1948, about 100 feet northeast of bridge crossing northeast Cape Fear River, in wooded area.

Oi—0 to 3 inches; very dark brown (10YR 2/2) fibric material; 75 percent fiber content after rubbing; friable; fibers are of moss, leaves, twigs, and roots; extremely acid; gradual wavy boundary.
Oa1—3 to 14 inches; black (10YR 2/1) sapric material; 10 percent fiber; weak coarse granular structure; friable; slightly sticky; common roots; sodium pyrophosphate extract is yellowish brown (10YR 5/4); extremely acid; gradual wavy boundary.
Oa2—14 to 30 inches; very dark grayish brown (10YR 3/2) sapric material; 20 percent fiber; less than 10 percent fiber content after rubbing; massive; friable; slightly sticky; few roots; sodium pyrophosphate extract is light yellowish brown (10YR 6/4); extremely acid; gradual wavy boundary.
Cg—30 to 60 inches; very dark grayish brown (10YR 3/2) loamy sand; single grain; loose; extremely acid.

Range in Characteristics

Thickness of organic layers: 16 to 51 inches of organic material over dominantly sandy sediments
Soil reaction: Extremely acid (less than 4.5 in 0.01 M calcium chloride) in the organic layers; ranges from extremely acid to strongly acid in the underlying mineral layers

Oi or Oe horizon:
Color—neutral or hue of 7.5YR or 10YR; value of 2 or 3 and chroma of 0 to 2

Oa horizon:
Color—neutral or hue of 7.5YR or 10YR; value of 2 or 3 and chroma of 0 to 2
Fiber content—10 to 33 percent unrubbed and less than 10 percent after rubbing

Cg horizon:
Color—neutral or hue of 7.5YR or 10YR; value of 2 to 6 and chroma of 0 to 2
Texture—typically sand, fine sand, loamy sand, or loamy fine sand; mucky analogs of the same fine-earth textures in some pedons; loamy thin subhorizons within a depth of 51 inches in some pedons; weighted average of upper 12 inches of Cg horizon or of the part of Cg horizon within a depth of 51 inches, whichever is thicker, is sandy; variable texture, typically ranging from sand to sandy clay loam, below a depth of 51 inches,

Pantego Series

Depth class: Very deep
Agricultural drainage class: Very poorly drained
Internal free water occurrence: Very shallow or shallow, common

Saturated hydraulic conductivity: Moderately high
Landscape: Upper Coastal Plain
Landform: Flats and broad interstream divides
Parent material: Loamy marine deposits
Slope: 0 to 2 percent
Taxanomic class: Fine-loamy, siliceous, semiactive, thermic Umbric Paleaquults

Typical Pedon

Pantego loam; in Pitt County, North Carolina, about 0.5 mile south of Winterville on Highway 11, about 100 feet west of road, in cultivated field.

Ap—0 to 10 inches; black (10YR 2/1) loam; weak fine granular structure; very friable; many fine roots; very strongly acid; gradual wavy boundary.
A—10 to 18 inches; very dark gray (10YR 3/1) loam; weak fine granular structure; friable; very strongly acid; clear smooth boundary.
Bt—18 to 27 inches; very dark gray (10YR 3/1) sandy clay loam; weak fine subangular blocky structure; friable; few faint clay films on faces of peds and in pores; very strongly acid; gradual wavy boundary.
Btg1—27 to 42 inches; gray (10YR 5/1) sandy clay loam; few fine and medium distinct brownish yellow (10YR 6/6) mottles; weak fine and medium subangular blocky structure; friable; slightly sticky; few faint clay films on faces of peds; very strongly acid; gradual smooth boundary.
Btg2—42 to 55 inches; gray (10YR 6/1) sandy clay loam; few medium and coarse distinct yellowish brown (10YR 5/6) mottles; weak fine subangular blocky structure; friable; slightly sticky; few faint clay films on faces of peds; very strongly acid; gradual wavy boundary.
Btg3—55 to 65 inches; gray (10YR 6/1) sandy clay loam; weak coarse subangular blocky structure; friable; few faint clay films on faces of peds; very strongly acid.

Range in Characteristics

Thickness of solum: More than 60 inches
Soil reaction: Strongly acid to extremely acid, except where lime has been applied

Oa horizon (where present):
Color—hue of 10YR, value of 2 or 3, and chroma of 1; or neutral and has value of 2

Ap or A horizon:
Color—neutral or hue of 10YR or 2.5Y; value of 2 or 3 and chroma of 0 to 2
Texture—loamy fine sand, loamy sand, fine sandy loam, sandy loam, loam, or mucky analogues of these textures

Eg horizon (where present):
Color—neutral or hue of 10YR or 2.5Y; value of 4 to 6 and chroma of 0 to 2
Texture—loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam

BEg horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 or 2
Texture—loam, sandy loam, fine sandy loam, or sandy clay loam

Bt horizon (where present):
Color—hue of 10YR or 2.5Y, value of 3, and chroma of 1 or 2
Texture—sandy clay loam, sandy loam, sandy clay, clay loam, fine sandy loam, or sandy loam

Btg horizon:
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2

Texture—sandy clay loam, sandy loam, sandy clay, clay loam, fine sandy loam, or sandy loam
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

BCg horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2
Texture—sandy clay loam, clay loam, sandy clay, sandy loam, or fine sandy loam

Cg horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture—sandy clay loam, clay loam, sandy loam, fine sandy loam, loamy fine sand, fine sand, loamy sand, or sand
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Paxville Series

Depth class: Very deep
Agricultural drainage class: Very poorly drained
Internal free water occurrence: Very shallow, common to persistent
Flooding frequency and duration: Rare
Saturated hydraulic conductivity: Moderately high
Landscape: Upper Coastal Plain and Sandhills
Landform: Stream terraces and flats
Parent material: Loamy marine deposits
Slope: 0 to 1 percent
Taxanomic class: Fine-loamy, siliceous, semiactive, thermic Typic Umbraquults

Typical Pedon

Paxville fine sandy loam; in Clarendon County, South Carolina, about 1.6 miles east of Turbeville, 100 feet north of U.S. Highway 378, in cultivated area.

Ap—0 to 9 inches; black (10YR 2/1) fine sandy loam; weak medium subangular blocky structure; friable; non-sticky and non-plastic; many fine roots; many fine pores; few clean quartz grains; very strongly acid; clear smooth boundary.
A—9 to 15 inches; black (10YR 2/1) fine sandy loam; weak medium subangular blocky structure; friable; non-sticky and non-plastic; common fine roots; many fine pores; very strongly acid; clear smooth boundary.
Btg1—15 to 30 inches; very dark grayish brown (10YR 3/2) fine sandy loam; weak medium subangular blocky structure; friable; slightly sticky and moderately plastic; common fine roots; common fine pores; many clay bridges between sand grains; 2 percent clean sand grains; few fine and medium faint dark grayish brown (10YR 4/2) iron depletions; very strongly acid; gradual smooth boundary.
Btg2—30 to 40 inches; very dark grayish brown (10YR 3/2) fine sandy loam; weak medium subangular blocky structure; firm; slightly sticky and moderately plastic; many clay bridges between sand grains; few pockets of sandy clay and sandy loam material; few pockets of clean sand grains; few fine distinct yellowish brown (10YR 5/6) masses of oxidized iron; very strongly acid; gradual smooth boundary.
BCg—40 to 48 inches; dark grayish brown (10YR 4/2) fine sandy loam; massive; friable; non-sticky and slightly plastic; few pockets of loamy sand material that has clean sand grains; many medium faint very dark grayish brown (10YR 3/2) masses of oxidized iron; very strongly acid; gradual smooth boundary.

2Cg1—48 to 72 inches; gray (10YR 5/1) fine sand; single grain; loose, non-sticky and non-plastic; few pockets of loamy material; many coarse distinct brown (10YR 5/3) masses of oxidized iron; very strongly acid; gradual smooth boundary.

2Cg2—72 to 99 inches; gray (10YR 5/1) fine sand; single grain; loose; non-sticky and non-plastic; common coarse and medium distinct brown (10YR 5/3) masses of oxidized iron; very strongly acid.

Range in Characteristics

Thickness of surface layer: 10 to 24 inches
Depth to base of argillic horizon: 40 to more than 80 inches
Depth to lithologic discontinuity (contrasting soil material): 40 to more than 80 inches
Rock fragment content: 0 to 5 percent; mostly quartz gravel
Soil reaction: Extremely acid to strongly acid, except where lime has been applied
Other distinctive features: None or few flakes of mica; clay mineralogy is kaolinitic

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 2 or 3, and chroma of 1 or 2; or neutral and has value of 2 to 3
Texture—loam, fine sandy loam, sandy loam, coarse sandy loam, loamy fine sand, or loamy sand

E or Eg horizon (where present):
Color—hue of 10YR, value of 3 to 6, and chroma of 1 or 2
Texture—loam, fine sandy loam, sandy loam, coarse sandy loam, loamy fine sand, or loamy sand
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Btg horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 7, and chroma of 1 or 2; or neutral and has value of 3 to 7
Texture—sandy clay loam, clay loam, loam, sandy loam, or fine sandy loam; thin horizons, less than 6 inches, of sandy clay in some pedons
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

BCg or BCtg horizon (where present):
Color—hue of 10YR to 5Y, value of 3 to 7, and chroma of 1 or 2; or neutral and has value of 3 to 7
Texture—fine sandy loam, sandy loam, or coarse sandy loam; or sandy clay loam with strata of coarser material
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

BC or BCt horizon (where present):
Color—hue of 10YR to 5Y, value of 3 to 7, and chroma of 3 or 4
Texture—fine sandy loam, sandy loam, or coarse sandy loam; or sandy clay loam with strata of coarser material
Redoximorphic features (where present)— masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Cg horizon (where present):

Color—hue of 10YR to 5Y, 5GY, and 5G, value of 4 to 7, and chroma of 1 or 2; or neutral and has value of 3 to 7

Texture—fine sandy loam, sandy loam, or coarse sandy loam; thin strata or pockets of coarser or finer textured material in some pedons

Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

2Cg horizon:

Color—hue of 10YR to 5Y, 5GY, and 5G, value of 4 to 7, and chroma of 1 or 2; or neutral and has value of 3 to 7

Texture—loamy fine sand, loamy sand, loamy coarse sand, fine sand, sand, or coarse sand; thin strata or pockets of finer textured material in some pedons

Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Pelion Series

Depth class: Moderately deep or deep to fragic soil properties
Agricultural drainage class: Moderately well drained
Internal free water occurrence: Moderately deep, common or transitory
Saturated hydraulic conductivity: Low
Landscape: Upper Coastal Plain and Sandhills
Landform: Marine terraces and uplands
Parent material: Loamy marine deposits
Slope: 0 to 15 percent
Taxanomic class: Fine-loamy, kaolinitic, thermic Fragiaquic Kanhapludults

Typical Pedon

Pelion loamy sand; in Lexington County, South Carolina, about 13.0 miles south of Lexington, 20 feet west of S.C. Secondary Highway S-32-278, about 4.5 miles north of U.S. Highway 178, in wooded area.

A—0 to 5 inches; grayish brown (10YR 5/2) loamy sand; weak fine granular structure; very friable; many fine roots; moderately acid; abrupt smooth boundary.

E—5 to 10 inches; pale brown (10YR 6/3) loamy sand; weak fine granular structure; very friable; common fine roots; 1 percent rounded gravel; moderately acid; gradual smooth boundary.

Bt—10 to 22 inches; reddish yellow (7.5YR 6/6) sandy clay loam; weak medium subangular blocky structure; firm; few fine roots; many clay bridges between sand grains; 4 percent rounded quartz gravel; 2 percent dark-colored concretions; few medium distinct yellowish red (5YR 5/6) and few fine prominent yellow (10YR 7/8) masses of oxidized iron; few fine prominent light gray (10YR 7/1) iron depletions; strongly acid; clear smooth boundary.

Btx—22 to 39 inches; yellow (10YR 7/6) sandy clay; moderate medium subangular blocky structure; firm; 50 percent brittle; few very fine pores; few faint clay films on faces of some peds; common fine prominent yellowish red (5YR 5/6) masses of oxidized iron; few fine prominent light gray (10YR 7/1) iron depletions; strongly acid; gradual smooth boundary.

BC—39 to 65 inches; yellow (10YR 7/6) sandy loam; weak medium subangular blocky structure; friable; few very fine pores; many coarse prominent strong brown (7.5YR 5/8) masses of oxidized iron; few medium prominent pale brown (10YR 6/3) and

light gray (10YR 7/1) iron depletions; few medium and coarse flakes of mica; strongly acid.

Range in Characteristics

Depth to base of argillic horizon: 40 to more than 60 inches
Depth to top of kandic horizon: 2 to 19 inches
Depth to lithologic discontinuity (contrasting sand sizes): 40 to 60 inches or more
Depth to fragic soil properties: 15 to 40 inches or more
Content of fragic soil properties: 30 to 60 percent, by volume, in the Btx horizon
Rock fragment content: 0 to 5 percent; mostly quartz gravel
Soil reaction: Extremely acid to strongly acid, except where lime has been applied
Mica content: 1 to 20 percent in the lower B horizon and the C horizon
Other distinctive features: Pockets or strata of white or gray kaolin clay in B and C horizons of some pedons

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 to 3; or neutral and has value of 3 to 5
Texture—coarse sand, sand, fine sand, loamy coarse sand, loamy sand, loamy fine sand, coarse sandy loam, sandy loam, or fine sandy loam

E horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 7, and chroma of 1 to 4; or neutral and has value of 3 to 7
Texture—coarse sand, sand, fine sand, loamy coarse sand, loamy sand, loamy fine sand, coarse sandy loam, sandy loam, or fine sandy loam

Bt horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 to 8, and chroma of 4 to 8
Texture—sandy loam, sandy clay loam, or clay loam in the upper part and sandy clay or clay in the lower part
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray; iron depletions in shades of gray commonly within upper 10 inches

Btx horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 to 8, and chroma of 3 to 8
Texture—sandy loam, sandy clay loam, or clay loam
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Btgx horizon (where present):
Color—hue of 7.5YR to 2.5Y, value of 4 to 8, and chroma of 1 or 2; or neutral and has value of 4 to 8
Texture—sandy loam, sandy clay loam, clay loam, or sandy clay
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Btg horizon:
Color—hue of 7.5YR to 2.5Y, value of 4 to 8, and chroma of 1 or 2; or neutral and has value of 4 to 8
Texture—sandy loam, sandy clay loam, or clay loam in the upper part and sandy clay or clay in the lower part
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

BC horizon:

Color—hue of 2.5YR to 2.5Y, value of 4 to 8, and chroma of 3 to 8
Texture—sandy loam or sandy clay loam; strata of finer textured material in some pedons
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

BCg horizon

Color—hue of 7.5YR to 2.5Y, value of 4 to 8, and chroma of 1 or 2; or neutral and has value of 4 to 8
Texture—sandy loam or sandy clay loam; strata of finer textured material in some pedons
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

C horizon:

Color—hue of 2.5YR to 2.5Y, value of 4 to 8, and chroma of 3 to 8
Texture—sandy loam, sandy clay loam, clay loam, sandy clay, or clay; pockets or strata of sand in many pedons
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Cg horizon:

Color—hue of 7.5YR to 2.5Y, value of 4 to 8, and chroma of 1 or 2; or neutral and has value of 4 to 8
Texture—sandy loam, sandy clay loam, clay loam, sandy clay, or clay; pockets or strata of sand in many pedons
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

2C horizon:

Color—hue of 2.5YR to 2.5Y, value of 4 to 8, and chroma of 3 to 8
Texture—coarse sand, sand, fine sand, loamy coarse sand, loamy sand, or loamy fine sand; pockets or strata of finer textured material in many pedons
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

2Cg horizon:

Color—hue of 7.5YR to 2.5Y, value of 4 to 8, and chroma of 1 or 2; or neutral and has value of 4 to 8
Texture—coarse sand, sand, fine sand, loamy coarse sand, loamy sand, or loamy fine sand; pockets or strata of finer textured material in many pedons
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

Plummer Series

Depth class: Very deep
Agricultural drainage class: Very poorly drained or poorly drained
Internal free water occurrence: Very shallow, persistent

Saturated hydraulic conductivity: Moderately high
Landscape: Upper Coastal Plain and Sandhills
Landform: Upland depressions, drainageways, and flats
Parent material: Sandy and loamy marine deposits
Slope: 0 to 2 percent
Taxanomic class: Loamy, siliceous, subactive, thermic Grossarenic Paleaquults

Typical Pedon

Plummer sand; in Wayne County, Georgia, about 2.6 miles east of Gardi on U.S. Highway 341, about 4.2 miles south on county road to crossroads, 0.2 mile east, in wooded area.

A—0 to 9 inches; dark gray (N 4/0) sand; weak fine granular structure; very friable; many medium and fine roots; many clean sand grains in lower part; very strongly acid; clear wavy boundary.
Eg1—9 to 28 inches; gray (5Y 6/1) sand; single grain; loose; few roots in upper part; common root holes that have brown stains; very strongly acid; gradual wavy boundary.
Eg2—28 to 50 inches; light gray (5Y 7/1) sand; single grain; loose; very strongly acid; gradual irregular boundary.
Btg—50 to 72 inches; light gray (5Y 7/1) sandy loam that has bodies of sandy clay loam; weak medium granular and subangular blocky structure; friable; sand grains bridged with clay; common medium and fine prominent yellowish brown (10YR 5/6) soft masses of oxidized iron; very strongly acid.

Range in Characteristics

Thickness of solum: 72 to more than 100 inches
Soil reaction: Extremely acid to strongly acid, except where lime has been applied

Oa horizon (where present):
Color—hue of 10YR to 5Y, value of 2 to 4, and chroma of 1 or 2; or neutral and has value of 2 to 4
Texture—muck

A horizon:
Color—hue of 10YR to 5Y, value of 2 to 4, and chroma of 1 or 2; or neutral and has value of 2 to 4
Texture—sand, fine sand, loamy fine sand, or loamy sand

Eg horizon:
Color—hue of 10YR to 5Y, value of 5 to 8, and chroma of 1 or 2; or neutral and has value of 5 to 8
Texture—sand, fine sand, loamy fine sand, or loamy sand
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown

BEg horizon (where present):
Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 1 or 2; or neutral and has value of 5 to 7
Texture—loamy sand or loamy fine sand
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown

Btg horizon:
Color—hue of 10YR to 5Y, value of 5 to 7, and chroma of 1 or 2; or neutral and has value of 5 to 7
Texture (fine-earth fraction)—sandy loam, fine sandy loam; or sandy clay loam;

pockets of loamy sand and sandy clay in some pedons; ranges from 13 to 35 percent clay

Redoximorphic features—few to many masses of oxidized iron in shades of red and yellow

Rains Series

Depth class: Very deep
Agricultural drainage class: Poorly drained
Internal free water occurrence: Very shallow, persistent
Saturated hydraulic conductivity: Moderately high
Landscape: Upper Coastal Plain
Landform: Flats and broad interstream divides
Parent material: Loamy marine deposits
Slope: 0 to 2 percent
Taxanomic class: Fine-loamy, siliceous, semiactive, thermic Typic Paleaquults (fig. 7)

Typical Pedon

Rains loamy sand; in Florence County, South Carolina, about 2.0 miles southeast of Timmonsville, 1.1 miles south of intersection of S.C. Highway 45 and U.S. Highway 76, about 150 feet west of S.C. Highway 45, in wooded area.

A—0 to 7 inches; very dark gray (10YR 3/1) sandy loam; weak fine granular structure; very friable; many fine and medium roots; very strongly acid; clear smooth boundary.

Eg—7 to 12 inches; light brownish gray (10YR 6/2) sandy loam; weak fine granular structure; very friable; many fine and few medium roots; many fine pores; few fingers of A horizon in upper part; very strongly acid; clear wavy boundary.

Btg1—12 to 20 inches; gray (10YR 6/1) sandy loam; weak coarse subangular blocky structure; friable; few fine and medium roots; many fine pores; many clay bridges between sand grains; few medium prominent yellowish brown (10YR 5/6) masses of oxidized iron in lower half; very strongly acid; gradual wavy boundary.

Btg2—20 to 40 inches; gray (10YR 6/1) sandy clay loam; weak medium subangular blocky structure; friable; few fine and medium roots; many fine pores; few faint clay films on faces of peds; few coarse pockets of gray sandy loam; common medium prominent yellowish brown (10YR 5/6) and few fine prominent red (2.5YR 4/6) masses of oxidized iron; very strongly acid; gradual wavy boundary.

Btg3—40 to 52 inches; gray (10YR 6/1) sandy clay loam; weak medium subangular blocky structure; firm; few fine pores; few faint clay films on faces of peds; few fine and medium prominent red (2.5YR 4/6) and yellowish brown (10YR 5/6) masses of oxidized iron; very strongly acid; gradual wavy boundary.

Btg4—52 to 62 inches; gray (10YR 6/1) sandy clay loam; weak medium subangular blocky structure; friable; few faint clay films on faces of peds; few medium prominent brownish yellow (10YR 6/6) masses of oxidized iron; very strongly acid; gradual wavy boundary.

BCg—62 to 79 inches; gray (10YR 6/1) sandy clay loam; weak coarse subangular blocky structure; friable; few fine distinct brownish yellow (10YR 6/6) masses of oxidized iron; very strongly acid; gradual wavy boundary.

2Cg—79 to 85 inches; light gray (10YR 7/1) sand; single grain; loose; very strongly acid.

Range in Characteristics

Depth to base of argillic horizon: 60 to more than 80 inches
Rock fragment content: 0 to 5 percent throughout

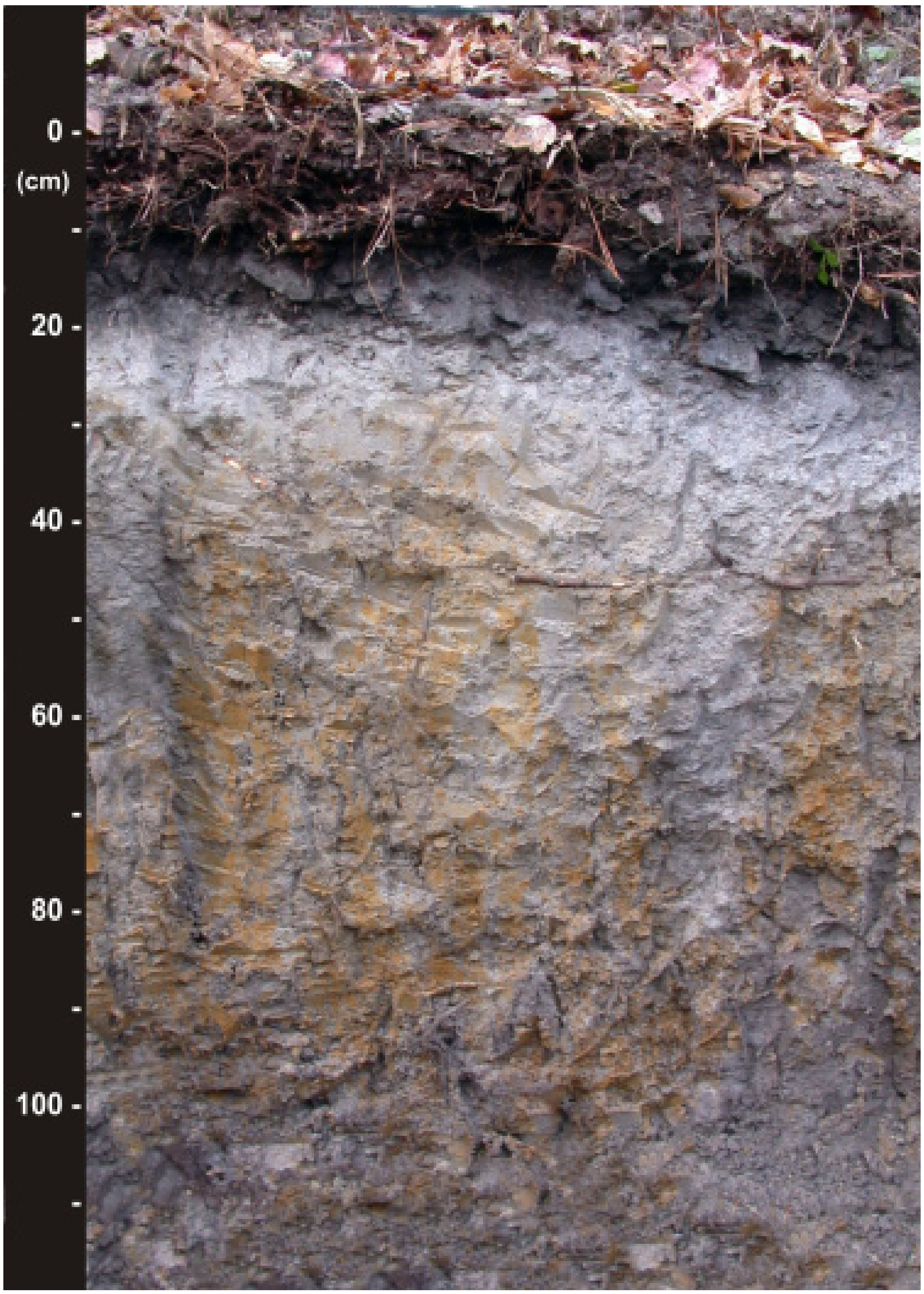


Figure 7—Profile of a soil in the Rains series (scale shown in centimeters).

Soil reaction: Extremely acid to strongly acid, except where lime has been applied
Other distinctive features: Less than 30 percent silt in upper 20 inches of argillic horizon

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 2 to 5, and chroma of 1 or 2; or neutral and has value of 2 to 5
Texture—sand, loamy coarse sand, loamy sand, loamy fine sand, coarse sandy loam, sandy loam, fine sandy loam, very fine sandy loam, or loam

Eg horizon:
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 0 to 2; or neutral and has value of 4 to 7
Texture—sand, loamy coarse sand, loamy sand, loamy fine sand, coarse sandy loam, sandy loam, fine sandy loam, very fine sandy loam, or loam
Redoximorphic features (where present)—masses of oxidized iron or iron-manganese masses in shades of red, yellow, and brown

Btg horizon:
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2; or neutral and has value of 4 to 7
Texture—typically sandy clay loam or clay loam; also sandy loam, fine sandy loam, or loam in upper part and sandy clay in lower part
Redoximorphic features—masses of oxidized iron or iron-manganese masses in shades of red, yellow, and brown and iron depletions in shades of gray

BCg or BCtg horizon (where present):
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2; or neutral and has value of 4 to 7
Texture—sandy loam, fine sandy loam, sandy clay loam, or sandy clay
Redoximorphic features—masses of oxidized iron or iron-manganese masses in shades of red, yellow, and brown and iron depletions in shades of gray

Cg horizon (where present):
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2; or neutral and has value of 4 to 7
Texture—coarse sandy loam, sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam; stratified with finer or coarser textured material in some pedons
Redoximorphic features—masses of oxidized iron or iron-manganese masses in shades of red, yellow, and brown and iron depletions in shades of gray

2Cg horizon:
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2; or neutral and has value of 4 to 7
Texture—coarse sand, sand, fine sand, loamy coarse sand, or loamy sand; stratified with finer textured material in some pedons

Rimini Series

Depth class: Very deep
Agricultural drainage class: Excessively drained
Internal free water occurrence: Very deep
Saturated hydraulic conductivity: High
Landscape: Upper Coastal Plain
Landform: Rims of Carolina bays
Parent material: Sandy marine deposits and eolian sands

Slope: 0 to 10 percent
Taxanomic class: Sandy, siliceous, thermic Entic Grossarenic Alorthods

Typical Pedon

Rimini sand; in Sumter County, South Carolina, about 10.0 miles south of Wedgefield on S.C. Highway 261, about 1.5 miles east on local road in Manchester State Forest, 500 feet south of road, in wooded area.

A—0 to 4 inches; dark gray (10YR 4/1) sand; single grain; loose; many fine roots; many uncoated white sand grains that have salt and pepper appearance; very strongly acid; gradual wavy boundary.
E1—4 to 21 inches; white (5Y 8/1) sand; single grain; loose; uncoated sand grains; many fine roots; strongly acid; clear smooth boundary.
E2—21 to 58 inches; white (N 8/0) sand; single grain; loose; uncoated sand grains; few fine roots; very strongly acid; abrupt wavy boundary.
Bh1—58 to 60 inches; black (5YR 2/1) sand; common medium faint dark reddish brown (5YR 3/2) mottles; weak medium subangular blocky structure; friable; slightly brittle; weakly cemented; most sand grains coated with organic matter; very strongly acid; clear wavy boundary.
Bh2—60 to 70 inches; dark reddish brown (5YR 3/2) sand; many coarse faint black (5YR 2/1) mottles; single grain; very friable; slightly brittle; sand grains coated with organic matter; very strongly acid; gradual wavy boundary.
BC—70 to 80 inches; dark brown (7.5YR 4/2) sand; single grain; loose; most uncoated sand grains in brown portion and coated sand grains in black portion; many coarse prominent black (5YR 2/1) spheroidal bodies; strongly acid; gradual wavy boundary.
C—80 to 88 inches; gray (10YR 5/1) sand; common coarse distinct black (10YR 2/1) mottles; single grain; loose; strongly acid.

Range in Characteristics

Thickness of solum: 60 to more than 80 inches
Depth to Bh horizon: 50 to 80 inches
Soil reaction: Extremely acid to moderately acid
Other distinctive features: Texture is sand or fine sand to a depth of more than 80 inches; less than 5 percent silt and clay in particle-size control section

A horizon:
Color—hue of 10YR, value of 3 to 5, and chroma of 1 or 2; or mixed white and black

E horizon:
Color—neutral or hue of 10YR to 5Y; value of 7 or 8 and chroma of 0 to 2
Other distinctive features—thin discontinuous Bh horizons or dark Bh bodies in E horizon of some pedons

Bh horizon:
Color—neutral or hue of 5YR to 10YR; value of 2 or 3 and chroma of 0 to 2
Other distinctive features—does not turn redder on ignition

BC horizon (where present):
Color—hue of 5YR to 10YR, value of 4 or 5, and chroma of 2 to 4
Other distinctive features—black or dark reddish brown spheroidal bodies in many pedons

C horizon:
Color—neutral or hue of 10YR or 2.5Y; value of 5 or 6 and chroma of 0 to 4

Rutlege Series

Depth class: Very deep
Agricultural drainage class: Very poorly drained
Internal free water occurrence: Very shallow, persistent
Saturated hydraulic conductivity: High
Landscape: Upper Coastal Plain
Landform: Flats, depressions, and floodplains
Parent material: Sandy and loamy marine deposits and eolian sands
Slope: 0 to 2 percent
Taxanomic class: Sandy, siliceous, thermic Typic Humaquepts

Typical Pedon

Rutlege loamy sand; in Marion County, South Carolina, about 1.25 miles north of Nichols, 500 feet east of S.C. Highway 9, in wooded area.

A—0 to 15 inches; black (10YR 2/1) loamy sand; weak medium granular structure; loose; common fine and medium roots; very strongly acid; gradual smooth boundary.
Cg1—15 to 35 inches; dark gray (10YR 4/1) sand; single grain; loose; few fine roots; very strongly acid; gradual wavy boundary.
Cg2—35 to 70 inches; grayish brown (10YR 5/2) sand; single grain; loose; few fine roots in upper part; tends to flow when saturated; very strongly acid.

Range in Characteristics

Soil reaction: Extremely acid to strongly acid, except where lime has been applied
Other distinctive features: 5 to 15 percent silt and clay in the 10- to 40-inch control section

Ap or A horizon:
Color—hue of 10YR to 5Y, value of 2 or 3, and chroma of 0 to 2
Texture—sand, fine sand, loamy sand, loamy fine sand, or mucky analogues of these textures

Cg horizon:
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 0 to 2
Texture—sand, loamy sand, fine sand, or loamy fine sand
Redoximorphic features (where present)—in shades with value of 5 to 8 and chroma of 1 to 6

Thursa Series

Depth class: Very deep
Agricultural drainage class: Well drained
Internal free water occurrence: Very deep
Saturated hydraulic conductivity: Moderately high
Landscape: Upper Coastal Plain
Landform: Ridges, side slopes, flats, and broad interstream divides
Parent material: Loamy marine deposits
Slope: 0 to 6 percent
Taxanomic class: Fine-loamy, kaolinitic, thermic Typic Kandiudults

Typical Pedon

Thursa sand; in Lee County, South Carolina, about 1.2 miles west on W. Church Street from intersection of Main Street and W. Church Street in Bishopville, 1.5 miles west on

Camden Highway, 0.2 mile south on Traub Road, 45 feet east of Traub Road, in cultivated field.

Ap—0 to 10 inches; brown (10YR 5/3) sand; weak medium subangular blocky structure; very friable; non-sticky and non-plastic; few fine and medium roots throughout; moderately acid; abrupt smooth boundary.

Bt1—10 to 28 inches; yellowish brown (10YR 5/8) sandy clay loam; moderate medium subangular blocky structure; friable; slightly sticky and moderately plastic; common distinct clay films on faces of peds; strongly acid; clear wavy boundary.

Bt2—28 to 35 inches; yellowish brown (10YR 5/8) sandy clay loam; few medium distinct yellowish red (5YR 5/8) mottles; moderate medium subangular blocky structure; friable; slightly sticky and moderately plastic; common distinct clay films on faces of peds; 1 percent 2 to 5 mm ironstone nodules; strongly acid; clear wavy boundary.

Bt3—35 to 50 inches; yellowish red (5YR 5/6) sandy clay; common medium distinct yellowish brown (10YR 5/6) mottles; moderate medium subangular blocky structure; friable; slightly sticky and moderately plastic; common prominent clay films on faces of peds; 1 percent 2 to 5 mm ironstone nodules; strongly acid; gradual wavy boundary.

Bt4—50 to 80 inches; red (2.5YR 5/8) clay; common medium prominent yellowish brown (10YR 5/6) mottles; moderate medium subangular blocky structure; friable; slightly sticky and moderately plastic; common distinct clay films on faces of peds; 1 percent 2 to 5 mm ironstone nodules; very strongly acid.

Range in Characteristics

Depth to base of argillic horizon: 60 to more than 80 inches
Rock fragment content: 0 to 10 percent; mostly ironstone or quartz gravel
Soil reaction: Extremely acid to moderately acid, except where lime has been applied

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 to 4
Texture—sand, loamy sand, sandy loam, or fine sandy loam

E horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 2 to 6
Texture—sand or loamy sand

Bt horizon (upper part):
Color—hue of 7.5YR or 10YR, value of 5 to 8, and chroma of 3 to 8
Texture—commonly sandy clay loam; sandy loam, fine sandy loam, or clay loam in some pedons
Mottles (where present)—non-redoximorphic mottles in shades of red and brown

Bt horizon (lower part):
Color—hue of 10R to 5YR, value of 3 to 5, and chroma of 4 to 8
Texture—commonly clay; sandy clay loam, sandy clay, or clay loam in some pedons
Mottles (where present)—non-redoximorphic mottles in shades of red, brown, and yellow

Uchee Series

Depth class: Very deep
Agricultural drainage class: Well drained
Internal free water occurrence: Moderately deep or deep, common, thin
Saturated hydraulic conductivity: Moderately high

Landscape: Upper Coastal Plain and Sandhills
Landform: Ridges, low hills, and side slopes
Parent material: Sandy and loamy marine deposits
Slope: 6 to 12 percent
Taxanomic class: Loamy, kaolinitic, thermic Arenic Kanhapludults

Typical Pedon

Uchee loamy sand; in Lee County, Alabama, about 2.2 miles south-southeast of Meadows Mill, 600 feet south and 2,400 feet west of the northeast corner of sec. 4, T. 17 N., R. 28 E., in idle field.

Ap—0 to 6 inches; dark grayish brown (10YR 4/2) loamy sand; single grain; very friable; many fine roots; strongly acid; abrupt smooth boundary.

E—6 to 26 inches; yellowish brown (10YR 5/4) loamy sand; single grain; very friable; common fine roots; 10 percent gravel that is less than 1 inch in diameter; very strongly acid; clear smooth boundary.

Bt1—26 to 32 inches; yellowish brown (10YR 5/4) sandy loam; common medium faint light yellowish brown (10YR 6/4) mottles; weak medium subangular blocky structure; friable; slightly brittle; few fine roots; sand grains bridged and coated with clay; 5 percent gravel that is less than 1 inch in diameter; very strongly acid; clear smooth boundary.

Bt2—32 to 39 inches; brownish yellow (10YR 6/6) sandy clay loam; common medium distinct strong brown (7.5YR 5/6) and few medium distinct very pale brown (10YR 7/4) mottles; weak medium subangular blocky structure; friable; slightly compact in place; few fine roots; faint clay films on faces of peds; 12 percent gravel that is less than 2 inches in diameter; very strongly acid; abrupt smooth boundary.

Bt3—39 to 47 inches; brownish yellow (10YR 6/8) clay; common medium prominent red (2.5YR 4/6) and common medium distinct strong brown (7.5YR 5/8) mottles; moderate medium subangular blocky structure; firm; common faint clay films on faces of peds; 8 percent gravel that is less than 0.5 inch in diameter; few nodules of plinthite; very strongly acid; clear smooth boundary.

C1—47 to 66 inches; variegated strong brown (7.5YR 5/6), red (2.5YR 4/6), and very pale brown (10YR 7/4) sandy clay loam; massive; friable; common coarse streaks and pockets of white (10YR 8/2) clay; massive; very firm; few fine flakes of mica; very strongly acid; abrupt smooth boundary.

2C2—66 to 84 inches; white (10YR 8/1) loamy sand; few fine distinct pink (7.5YR 7/4) mottles; massive; loose; few vertical streaks of yellowish red (5YR 5/8) clay; common fine flakes of mica; very strongly acid.

Range in Characteristics

Thickness of solum: 40 to more than 60 inches
Soil reaction: Very strongly acid or strongly acid, except where lime has been applied
Rock fragment content: 0 to 35 percent in the A and E horizons and 0 to 15 percent in the B and C horizons; mostly quartz gravel

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 6, and chroma of 1 to 4
Texture (fine-earth fraction)—loamy sand, loamy coarse sand, loamy fine sand, or sand

E horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 3 to 6
Texture (fine-earth fraction)—loamy sand, loamy fine sand, loamy coarse sand, or sand

EB or BE horizon (where present):
Color—hue of 7.5YR or 10YR, value of 4 to 7, and chroma of 4 to 8
Texture (fine-earth fraction)—loamy sand or sandy loam

Bt horizon (upper part):
Color—hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 4 to 8; hue of 5YR, value of 5 to 7, and chroma of 4 to 8 in some pedons
Texture—sandy loam or sandy clay loam
Redoximorphic features (where present)—masses of oxidized iron in shades of red, yellow, and brown

Bt horizon (lower part):
Color—hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 4 to 8; hue of 5YR, value of 5 to 7, and chroma of 4 to 8 in some pedons; lower part of Bt horizon has no dominant matrix color and is variegated in shades of brown, red and gray in some pedons
Texture—sandy clay loam, sandy clay, or clay
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

BC or CB horizon (where present):
Color—hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 4 to 8; hue of 5YR, value of 5 to 7, and chroma of 4 to 8 in some pedons; lower part of Bt horizon has no dominant matrix color and is variegated in shades of brown, red and gray in some pedons
Texture—sandy clay loam, sandy loam, or loamy sand
Redoximorphic features—masses of oxidized iron in shades of red, yellow, and brown and iron depletions in shades of brown, yellow, olive, and gray

C horizon:
Color—variegated in shades of yellow, brown, red, and gray
Texture—sandy loam or sandy clay loam; streaks or strata of coarser and finer textured material in many pedons

2C horizon (where present):
Color—ranges from white to red
Texture—loamy sand or sandy loam; streaks or strata of coarser or finer textured material in many pedons

Udorthents

Depth class: Very deep
Agricultural drainage class: Variable; somewhat excessively drained to moderately well drained
Internal free water occurrence: Variable; deep to very deep, transitory
Saturated hydraulic conductivity: Variable; moderately high or high
Landscape: Upper Coastal Plain and Sandhills
Landform: Uplands, borrow pits, and leveled land
Parent material: Sandy and loamy earthy fill
Slope: 0 to 15 percent

Typical Pedon

A typical pedon is not given for these soils. The excavated areas are mainly borrow pits from which soil material has been removed and used as a foundation for roads or buildings or as topsoil.

Udorthents have colors in shades of red, yellow, brown, and gray. The texture typically is loamy.

Range in Characteristics

Rock fragment content: 0 to 15 percent; mostly quartz gravel
Soil reaction: Very strongly acid to slightly acid, except where lime has been applied

Vaucluse Series

Depth class: Moderately deep to fragic soil properties
Agricultural drainage class: Well drained
Internal free water occurrence: Very deep
Saturated hydraulic conductivity: Moderately low
Landscape: Upper Coastal Plain and Sandhills
Landform: Ridges and low hills
Parent material: Sandy and loamy marine deposits
Slope: 2 to 15 percent
Taxanomic class: Fine-loamy, kaolinitic, thermic Fragic Kanhapludults

Typical Pedon

Vaucluse loamy sand; in Richland County, South Carolina, about 10.0 miles east of Columbia, 0.7 mile northeast of junction of Secondary Roads 935 and Secondary Road 86, about 60 feet from private drive, 50 feet south of Secondary Road 86, in forested area.

Ap—0 to 6 inches; dark grayish brown (10YR 4/2) loamy sand; weak fine granular structure; very friable; many fine and medium roots; strongly acid; abrupt smooth boundary.

E—6 to 15 inches; yellowish brown (10YR 5/4) loamy sand; single grain; loose; many fine and medium roots; 1 percent ironstone fragments; strongly acid; clear wavy boundary.

Bt—15 to 29 inches; strong brown (7.5YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; common fine and medium roots; common fine pores; common faint clay films on faces of peds; common fine faint yellowish red (5YR 5/6) relic masses of oxidized iron; 2 percent ironstone fragments; very strongly acid; abrupt wavy boundary.

Btx—29 to 58 inches; 70 percent red (2.5YR 5/8) sandy loam; 3 to 12 inches in horizontal dimension and 10 to 40 inches in vertical dimension; massive; very firm in about 50 percent of the mass and firm in the remainder; brittle; dense; few fine roots; 20 percent strong brown (7.5YR 5/8) and 10 percent yellow (10YR 7/6) sandy clay loam; 1/2 to 1 1/2 inches thick and 10 to 30 inches long, occurring about equally in vertical and horizontal streaks; moderate medium subangular blocky structure; friable; common medium roots; few fine prominent white masses of kaolin; many prominent clay films on faces of peds, 3 percent ironstone fragments; areas that have brown and yellow color are relic redoximorphic features; strongly acid; gradual smooth boundary.

BC—58 to 72 inches; red (2.5YR 5/8) sandy loam; weak coarse subangular blocky structure; friable; sand grains coated with clay; common medium distinct strong brown (7.5YR 5/6) relic masses of oxidized iron that are sandy clay loam; strongly acid.

Range in Characteristics

Depth to base of argillic horizon: 40 to 75 inches
Depth to top of kandic horizon: 4 to 19 inches

Depth to fragic soil properties: 15 to 35 inches
Content of fragic soil properties: 30 to 60 percent, by volume, in the Btx horizon
Depth to densic materials: More than 40 inches
Depth to lithologic discontinuity (contrasting sand sizes or abrupt textural change): 40 inches or more
Soil reaction: Extremely acid to strongly acid, except where lime has been applied
Rock fragment content: 0 to 60 percent in the A and E horizons and 0 to 15 percent in the B and C horizons; mostly quartz or ironstone gravel
Other distinctive features—0 to 10 percent fine to coarse pockets or irregularly shaped masses of white or light gray kaolin clay

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 to 4
Texture (fine-earth fraction)—sand, loamy coarse sand, loamy sand, sandy loam, or fine sandy loam

E horizon:
Color—hue of 10YR, value of 4 to 7, and chroma of 3 to 6
Texture (fine-earth fraction)—sand, loamy coarse sand, loamy sand, sandy loam, or fine sandy loam

Bt horizon (upper part):
Color—hue of 2.5YR to 10YR, value of 4 to 7, and chroma of 4 to 8
Texture—sandy loam or sandy clay loam
Redoximorphic features (where present)—relic masses of oxidized iron in shades of red, yellow, and brown

Bt horizon (lower part, where present):
Color—hue of 2.5YR to 10YR, value of 4 to 7, and chroma of 4 to 8
Texture—sandy loam, sandy clay loam, or sandy clay
Redoximorphic features (where present)—relic masses of oxidized iron in shades of red, yellow, and brown and relic iron depletions in shades of brown, yellow, and gray

Btx horizon:
Color—hue of 2.5YR to 10YR, value of 4 to 7, and chroma of 4 to 8
Texture—sandy loam, sandy clay loam, or sandy clay
Redoximorphic features (where present)—relic masses of oxidized iron in shades of red, yellow, and brown and relic iron depletions in shades of brown, yellow, and gray

BC horizon:
Color—hue of 2.5YR to 10YR, value of 4 to 7, and chroma of 1 to 8; or variegated in shades of these colors
Texture—loamy sand, coarse sandy loam, sandy loam, or sandy clay loam
Redoximorphic features (where present)—relic masses of oxidized iron in shades of red, yellow, and brown and relic iron depletions in shades of brown, yellow, and gray

C or Cd horizon (where present):
Color—hue of 2.5YR to 10YR, value of 4 to 7, and chroma of 1 to 8; or variegated in shades of these colors
Texture—coarse sandy loam, sandy loam, or sandy clay loam
Redoximorphic features (where present)—relic masses of oxidized iron in shades of red, yellow, and brown and relic iron depletions in shades of brown, yellow, and gray

2C horizon (where present):
Color—hue of 2.5YR to 10YR, value of 4 to 7, and chroma of 1 to 8; or coarsely variegated in shades of these colors
Texture—loamy sand or loamy coarse sand
Redoximorphic features (where present)—relic masses of oxidized iron in shades of red, yellow, and brown and relic iron depletions in shades of brown, yellow, and gray

Wagram Series

Depth class: Very deep
Agricultural drainage class: Well drained
Internal free water occurrence: Very deep
Saturated hydraulic conductivity: Moderately high
Landscape: Upper Coastal Plain
Landform: Ridges, side slopes, and broad interstream divides
Parent material: Sandy and loamy marine deposits
Slope: 0 to 6 percent
Taxanomic class: Loamy, kaolinitic, thermic Arenic Kandiudults (fig. 8)

Typical Pedon

Wagram loamy sand; in Scotland County, North Carolina, about 4.2 miles north of Laurinburg on U.S. Highway 501, about 0.2 mile north of Five-Points, 75 feet west of highway, in cultivated field.

Ap—0 to 8 inches; grayish brown (10YR 5/2) loamy sand; single grain; loose, non-sticky and non-plastic; moderately acid; abrupt smooth boundary.
E—8 to 24 inches; pale brown (10YR 6/3) loamy sand; single grain; loose, non-sticky and non-plastic; few lenses of sandy loam; strongly acid; gradual wavy boundary.
Bt1—24 to 27 inches; yellowish brown (10YR 5/6) sandy loam; few fine distinct grayish brown (10YR 5/2) mottles; weak medium subangular blocky structure; friable; non-sticky and non-plastic; few penetrations of loamy sand material from E horizon in old root channels; few areas are brittle; strongly acid; clear wavy boundary.
Bt2—27 to 38 inches; yellowish brown (10YR 5/8) sandy clay loam; weak medium subangular blocky structure; friable; slightly sticky and slightly plastic; few faint clay films in pores and on faces of peds; strongly acid; gradual wavy boundary.
Bt3—38 to 52 inches; yellowish brown (10YR 5/8) sandy clay loam; common medium distinct yellowish red (5YR 5/8) mottles; weak medium and coarse subangular blocky structure; friable; slightly sticky and slightly plastic; few faint clay films on faces of peds; common clean grains of coarse sand; strongly acid; gradual wavy boundary.
Bt4—52 to 75 inches; yellowish brown (10YR 5/6) sandy clay loam; few medium distinct yellowish red (5YR 5/8) and few medium faint pale brown (10YR 6/3) mottles; weak medium and coarse subangular blocky structure; friable; slightly sticky and slightly plastic; strongly acid; gradual irregular boundary.
BC—75 to 82 inches; yellowish brown (10YR 5/6) sandy loam; massive; friable; non-sticky and non-plastic; few lenses or pockets of sandy clay loam; many medium and coarse prominent gray (10YR 6/1) iron depletions; very coarse sand grains in some gray areas; very strongly acid.

Range in Characteristics

Thickness of sandy surface and subsurface layers: 20 to 39 inches
Depth to top of argillic horizon: 20 to 39 inches
Depth to base of argillic horizon: 60 to 80 inches

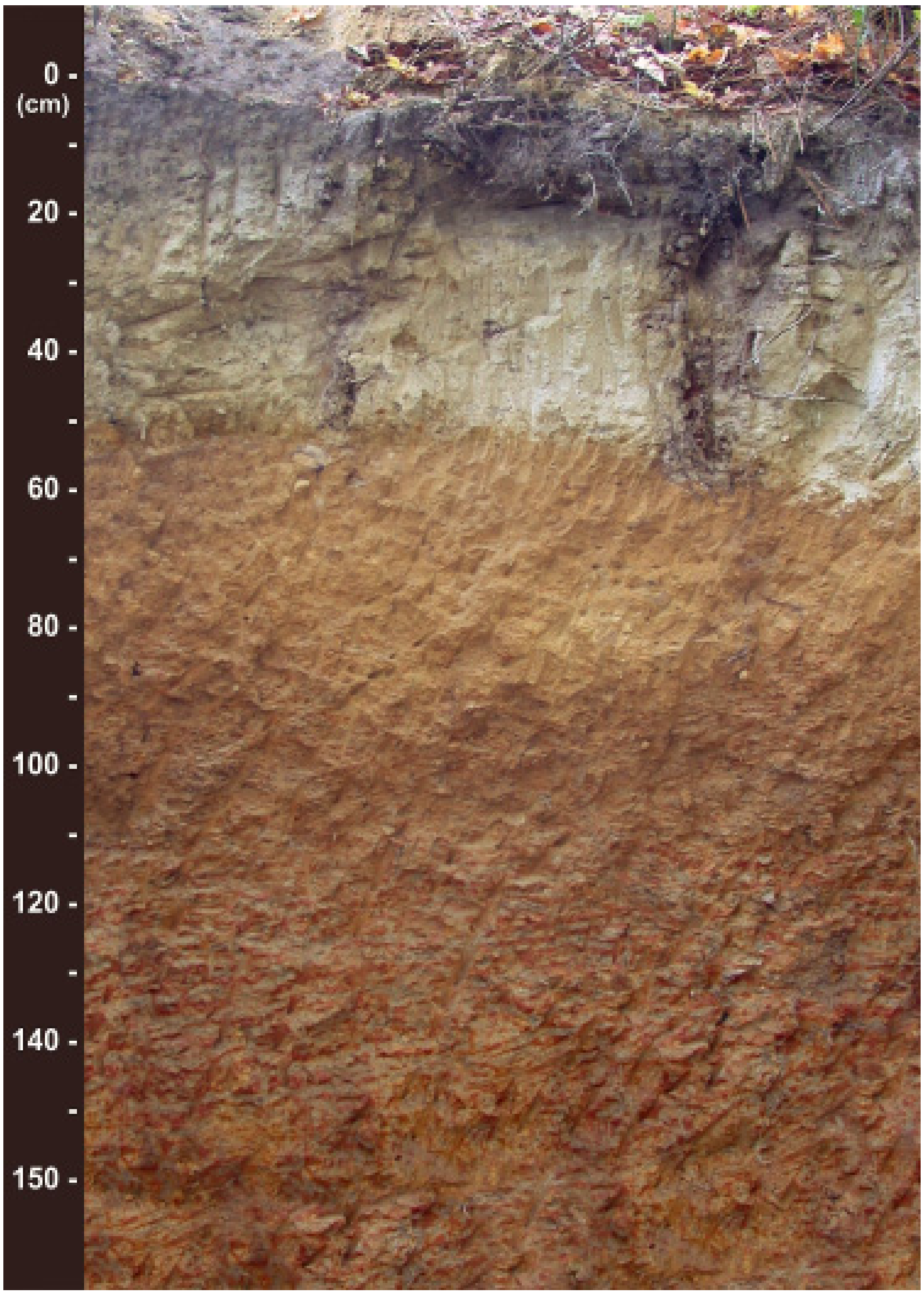


Figure 8—Profile of a soil in the Wagram series (scale shown in centimeters).

Depth to top of kandic horizon: 20 to 39 inches
Rock fragment content: 0 to 5 percent; mostly quartz gravel or ironstone fragments
Other distinctive features: 0 to 5 percent plinthite in lower part of Bt horizon and 0 to 15 percent below 60 inches
Soil reaction: Extremely acid to strongly acid, except where lime has been applied

Ap or A horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 6, and chroma of 1 to 4; or neutral and has value of 3 to 6
Texture—sand, fine sand, loamy sand, or loamy fine sand

E horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 2 to 4; or neutral and has value of 4 to 8
Texture—sand, fine sand, loamy sand, or loamy fine sand

Bt horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 or 6, and chroma of 4 to 8
Texture—sandy loam or sandy clay loam
Mottles (where present)—in shades of red, brown, and yellow
Redoximorphic features (where present)—masses of oxidized iron in shades of red, brown, and yellow below 72 inches and iron depletions in shades of brown, yellow, olive, and gray

BC or BCt horizon (where present):
Color—hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 8; or variegated in shades of these colors
Texture—sandy loam, loam, sandy clay loam, or clay loam
Redoximorphic features (where present)—masses of oxidized iron in shades of red, brown, and yellow and iron depletions in shades of brown, yellow, olive, and gray

Wakulla Series

Depth class: Very deep
Agricultural drainage class: Somewhat excessively drained
Internal free water occurrence: Deep or very deep, transitory
Saturated hydraulic conductivity: High or very high
Landscape: Upper Coastal Plain and Sandhills
Landform: Uplands, low hills, and rims of Carolina bays
Parent material: Sandy and loamy marine deposits and eolian sands
Slope: 0 to 15 percent
Taxanomic class: Siliceous, thermic Psammentic Hapludults

Typical Pedon

Wakulla sand; in Robeson County, North Carolina, about 2.25 miles west of St. Pauls, 1.5 miles west of Interstate 95 on Secondary Road 1006; about .38 mile north, in cultivated field.

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) sand; single grain; loose; few medium and fine roots; moderately acid; abrupt wavy boundary.
E—7 to 24 inches; light yellowish brown (10YR 6/4) sand; single grain; loose; few fine roots; strongly acid; clear wavy boundary.
Bt—24 to 42 inches; strong brown (7.5YR 5/8) loamy sand; weak fine granular structure; very friable; few fine roots; clay bridges between sand grains; strongly acid; gradual wavy boundary.

C1—42 to 56 inches; yellowish brown (10YR 5/8) sand; single grain; loose; very strongly acid; gradual wavy boundary.
C2—56 to 83 inches; yellow (10YR 7/6) sand; single grain; loose; about half of sand grains uncoated; very strongly acid.

Range in Characteristics

Thickness of solum: 28 to 60 inches; 38 to 48 inches in most pedons
Soil reaction: Very strongly acid to moderately acid, except where lime has been applied.

Ap or A horizon:
Color—hue of 10YR, value of 4 or 5, and chroma of 2 to 4
Texture—sand, loamy sand, fine sand, or loamy fine sand

E horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 4 to 8
Texture—sand, loamy sand, fine sand, or loamy fine sand

Bt horizon:
Color—hue of 5YR to 10YR, value of 4 to 6, and chroma of 6 to 8
Texture—loamy sand or loamy fine sand; 10 to 20 percent silt and clay

C horizon:
Color—hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 1 to 8
Texture—sand, fine sand, or coarse sand
Other distinctive features—streaks or mottles in shades of yellow and brown in some pedons

Formation of the Soils

This section describes the factors of soil formation and relates them to the soils in the survey area.

Factors of Soil Formation

Soils are formed by processes of the environment acting upon geologic materials, such as metamorphic, igneous, and sedimentary rocks, and fluvial stream sediments. The characteristics of a soil are determined by the combined influence of parent material, climate, plant and animal life, relief, and time. These five factors are responsible for the profile development and chemical properties that differentiate soils (Buol and others, 1980).

Parent Material

Parent material is the unconsolidated mass in which a soil forms. In Scotland County, parent material is a major factor in determining what kind of soil forms and can be correlated to some degree to geologic formations. The general soil map can be used as an approximate guide to the geology of the county.

The general soil map units and the geologic material of their parent material are as follows:

The soils of the Wakulla-Candor-Pelion general soil map unit formed in sandy and loamy marine deposits and eolian sands.

The soils of the Wagram-Noboco-Norfolk and Autryville-Blanton general soil map units formed in sandy and loamy marine deposits.

The soils of the Coxville-McColl general soil map unit formed in clayey marine deposits.

The soils of the Rutlege-Johnston-Kenansville general soil map unit formed in sandy and loamy alluvium and old alluvium.

The soils of the Johnston-Pamlico general soil map unit formed in sandy and loamy alluvium and organic material over sandy material.

Parent material is largely responsible for the chemical and mineralogical composition of soils and for the major differences among the soils of the county. Major differences in parent material, such as differences in texture, can be observed in the field. Less distinct differences, such as differences in mineralogical composition, can be determined only by careful laboratory analysis.

Climate

Climate, particularly precipitation and temperature, affects the physical, chemical, and biological relationships in the soil. It influences the rate at which rocks weather and organic matter decomposes. The amount of leaching in a soil is related to the amount of rainfall and the movement of water through the soil. The effects of climate also control the kinds of plants and animals living in and on the soil. Temperature influences the kind and growth of organisms and the speed of chemical and physical reactions in the soil.

Scotland County has a warm, humid climate. The climate favors rapid chemical processes, which result in the decomposition of organic matter and the weathering of rocks. The effects of climate are reflected in the soils of the county. Mild temperatures throughout the year and abundant rainfall have resulted in the depletion of organic matter and considerable leaching of soluble bases. Because variations in the climate of the county are small, climate has probably not caused major local differences among soils. Climate has mainly affected the formation of soils in Scotland County by altering the parent material through changes in temperature and in the amount of precipitation and through influences on plant and animal life.

Plant and Animal Life

Plants and animals influence the formation and differentiation of soil horizons. The type and number of organisms in and on the soil are determined in part by climate and in part by the nature of the soil material, relief, and the age of the soil. Bacteria, fungi, and other micro-organisms aid in the weathering of rocks and in the decomposition of organic matter. The plants and animals that live on a soil are the primary source of organic material.

Plants largely determine the kinds and amounts of organic matter that are added to a soil under normal conditions and the way in which the organic matter is added. They also are important for the changes of base status and for the leaching process of a soil.

Animals convert complex compounds into simpler forms, add organic matter to the soil, and modify certain chemical and physical properties of soil. In Scotland County most of the organic material accumulates on the surface. It is acted upon by micro-organisms, fungi, earthworms, and other forms of life and by direct chemical reaction. It is mixed with the uppermost mineral part of the soil by the activities of earthworms and other small invertebrates.

Under the native forest of this county, not enough bases are brought to the surface by plants to counteract the effects of leaching. Generally, the soils of the county developed under a hardwood forest. Trees took up elements from the subsoil and added organic matter to the soil by depositing leaves, roots, twigs, and other plant remains on the surface. The material deposited on the surface was acted upon by organisms and underwent chemical reaction.

Organic material decomposes rapidly in the county because of the moderate temperature, the abundant moisture supply, and the character of the organic material. It decays so rapidly that little of it accumulates in the soil.

Relief

Relief causes differences in free drainage, surface runoff, soil temperature, and the extent of geologic erosion. Relief in Scotland County is largely determined by the kind of underlying bedrock, the geology of the area, and the extent to which the landscape is dissected by streams.

Relief affects the percolation of water through the profile. Water movement through the profile is important in soil development because it aids chemical reactions and is necessary for leaching.

Slopes in the county range from 0 to 15 percent. The upland soils that have slopes of less than 8 percent generally have deeper, better defined profiles than the steeper soils. Relief affects the depth of soils. On some soils that have slopes of 15 percent, geologic erosion removes soil material almost as fast as it forms.

Relief also affects drainage. For example, a high water table usually occurs in nearly level and gently sloping areas. Duplin and Lynchburg soils on uplands are

moderately well drained to somewhat poorly drained because they are gently sloping and water moves through them slowly.

Soils at the lower elevations are less sloping and receive runoff from the adjacent higher areas. This runoff tends to accumulate in the nearly level to slightly concave areas. The somewhat poorly drained Dunbar soils and the poorly drained Bibb soils on flood plains are in these areas.

Time

The length of time that soil material has been exposed to the soil-forming processes accounts for some differences between soils. The formation of a well defined profile, however, also depends on other factors. Less time is required for a profile to develop in coarse textured material than in similar but finer textured material, even if the environment is the same for both materials. Less time is required for a profile to develop in an area, in Scotland County, which is warm and humid and has a dense plant cover, than in a cold, dry area that has a sparse plant cover.

Soils vary considerably in age. The length of time that a soil has been forming is generally reflected in the profile. Old soils generally have better defined horizons than young soils. In Scotland County, the effects of time as a soil-forming factor are more apparent in the older soils that are in the broader parts of the uplands. In contrast, young soils, such as Johnston and Bibb soils, formed in recent alluvium on flood plains and have not been in place long enough to develop as completely as the older soils.

Processes of Horizon Differentiation

One or more soil-forming processes are involved in the formation of soil horizons. These processes are the accumulation of organic matter; the leaching of carbonates and other soluble material; the chemical weathering, mainly by hydrolysis, of primary minerals into silicate clay minerals; the translocation of silicate clay and some silt-sized particles from one horizon to another; and the reduction and transfer of iron.

These processes have been active in the formation of most of the soils in Scotland County. The interaction of the first four processes is indicated by the strongly expressed horizons in Norfolk soil. All five processes have probably been active in the formation of the moderately well drained Goldsboro and Pelion soils. Some organic matter has accumulated in all of the soils in the survey area. Most of the soils contain low amounts of organic matter in the surface layer. The content of organic matter ranges from low, as in Ailey soils, to high and very high, as in Johnston and Pamlico soils.

Most of the soils in the survey area are acid in the upper layers, unless the surface layer has been limed, because of the humid climate and low base content of most of the parent materials from which the soils formed.

The translocation of clay minerals is an important process in the development of many soils in the survey area. As clay minerals are removed from the A horizon, they accumulate as clay films on the faces of peds, in pores, and in root channels in the B horizon.

As silicate clay forms from primary minerals, some iron is commonly released as hydrated oxides. These oxides are generally red. Even if they occur in small amounts, they give the soil material a brownish color. They are largely responsible for the strong brown, yellowish brown, or reddish brown colors that are dominant in the subsoil of many soils in the survey area.

The reduction and transfer of iron has occurred in all of the soils that are not characterized by good natural drainage. This process, known as gleying, is evidenced by a gray matrix color and by iron or clay depletions. Some of the iron may be reoxidized and segregated and thus form yellow, brown, red, or other brightly colored

masses of iron accumulation in an essentially gray matrix in the subsoil. Nodules or concretions of iron ore or manganese also commonly form as a result of this process. Soil features associated with chemically reduced iron are referred to as redoximorphic features (Vepraskas, 1992).

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Buol, S.W., F.D. Hole, and R.J. McCracken. 1980. Soil genesis and classification. 3rd edition.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hardison, R.B., J.W. Nelson, and David D. Long. 1909. Soil Survey of Scotland County, North Carolina. U.S. Department of Agriculture, Bureau of Soils.

Horton, Robert E. 1967. Soil Survey of Scotland County, North Carolina. U.S. Department of Agriculture, Soil Conservation Service.

Hurt, G.W., P.M. Whited, and R.F. Pringle, editors. Version 5.0, 2002. Field indicators of hydric soils in the United States.

Lauringburg / Scotland County Chamber of Commerce. Scotland County, NC, USA [online]. Available: http://www.scotlandcountync.org (September 22, 2006).

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Schoeneberger, P.J., D.A. Wysocki, E.C. Benham, and W.D. Broderson, editors. 2002. Field book for describing and sampling soils. Version 2.0. U.S. Department of Agriculture, Natural Resources Conservation Service.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18 [online]. Available: http://soils.usda.gov/technical/.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service [online]. Available: http://soils.usda.gov/technical/.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

Vepraskas, Michael J. 1992. Redoximorphic features for identifying aquic conditions. North Carolina State University, North Carolina Agricultural Research Service Bulletin 301.

Glossary

Many of the terms relating to landforms, geology, and geomorphology are defined in more detail in the “National Soil Survey Handbook” (available in local offices of the Natural Resources Conservation Service or on the Internet).

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvium. Unconsolidated material, such as gravel, sand, silt, clay, and various mixtures of these, deposited on land by running water.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Aspect. The direction toward which a slope faces. Also called slope aspect.

Association, soil. A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Backswamp. A flood-plain landform. Extensive, marshy or swampy, depressed areas of flood plains between natural levees and valley sides or terraces.

Basal area. The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Base slope (geomorphology). A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bottom land. An informal term loosely applied to various portions of a flood plain.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

Breaks. A landscape or tract of steep, rough or broken land dissected by ravines and gullies and marking a sudden change in topography.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions. See Redoximorphic features.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

COLE (coefficient of linear extensibility). See Linear extensibility.

Colluvium. Unconsolidated, unsorted earth material being transported or deposited on side slopes and/or at the base of slopes by mass movement (e.g., direct gravitational action) and by local, unconcentrated runoff.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions. See Redoximorphic features.

Conglomerate. A coarse grained, clastic sedimentary rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of

soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the "Soil Survey Manual."

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Corrosion (soil survey interpretations). Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depth, soil. Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained*. These classes are defined in the "Soil Survey Manual."

Drainage, surface. Runoff, or surface flow of water, from an area.

Drainageway. A general term for a course or channel along which water moves in draining an area. A term restricted to relatively small, linear depressions that at some time move concentrated water and either do not have a defined channel or have only a small defined channel.

Earthy fill. See Mine spoil.

Ecological site. An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an

association of species that differ from those on other ecological sites in kind and/ or proportion of species or in total production.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Eolian deposit. Sand-, silt-, or clay-sized clastic material transported and deposited primarily by wind, commonly in the form of a dune or a sheet of sand or loess.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Most commonly applied to cliffs produced by differential erosion. Synonym: scarp.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

Fill slope. A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil. Sandy clay, silty clay, or clay.

First bottom. An obsolete, informal term loosely applied to the lowest flood-plain steps that are subject to regular flooding.

Flaggy soil material. Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.

Flagstone. A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain. The nearly level plain that borders a stream and is subject to flooding unless protected artificially.

Flood-plain landforms. A variety of constructional and erosional features produced by stream channel migration and flooding. Examples include backswamps, flood-plain splays, meanders, meander belts, meander scrolls, oxbow lakes, and natural levees.

Flood-plain step. An essentially flat, terrace-like alluvial surface within a valley that is frequently covered by floodwater from the present stream; any approximately

horizontal surface still actively modified by fluvial scour and/or deposition. May occur individually or as a series of steps.

Fluvial. Of or pertaining to rivers or streams; produced by stream or river action.

Foothills. A region of steeply sloping hills that fringes a mountain range or high-plateau escarpment. The hills have relief of as much as 1,000 feet (300 meters).

Footslope. The concave surface at the base of a hillslope. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

Forest type. A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Fragipan. A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A small channel with steep sides caused by erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hard to reclaim (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Head slope (geomorphology). A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill. A generic term for an elevated area of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline. Slopes are generally more than 15 percent. The distinction between a hill and a mountain is arbitrary and may depend on local usage.

Hillslope. A generic term for the steeper part of a hill between its summit and the drainage line, valley flat, or depression floor at the base of a hill.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the "Soil Survey Manual." The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

L horizon.—A layer of organic and mineral limnic materials, including coprogenous earth (sedimentary peat), diatomaceous earth, and marl.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Igneous rock. Rock that was formed by cooling and solidification of magma and that has not been changed appreciably by weathering since its formation. Major varieties include plutonic and volcanic rock (e.g., andesite, basalt, and granite).

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Interfluve. A landform composed of the relatively undissected upland or ridge between two adjacent valleys containing streams flowing in the same general direction. An elevated area between two drainageways that sheds water to those drainageways.

Interfluve (geomorphology). A geomorphic component of hills consisting of the uppermost, comparatively level or gently sloping area of a hill; shoulders of backwearing hillslopes can narrow the upland or can merge, resulting in a strongly convex shape.

Intermittent stream. A stream, or reach of a stream, that does not flow year-round but that is commonly dry for 3 or more months out of 12 and whose channel is generally below the local water table. It flows only during wet periods or when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Iron depletions. See Redoximorphic features.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin.—Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border.—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow.—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Subirrigation.—Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

Wild flooding.—Water, released at high points, is allowed to flow onto an area without controlled distribution.

Knoll. A small, low, rounded hill rising above adjacent landforms.

K_{sat}. Saturated hydraulic conductivity. (See Permeability.)

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

Linear extensibility. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Low strength. The soil is not strong enough to support loads.

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Masses. See Redoximorphic features.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement at depth in the earth's crust. Nearly all such rocks are crystalline.

Mine spoil. An accumulation of displaced earthy material, rock, or other waste material removed during mining or excavation. Also called earthy fill.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area. A kind of map unit that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine,*

medium, and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

Mountain. A generic term for an elevated area of the land surface, rising more than 1,000 feet (300 meters) above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can occur as a single, isolated mass or in a group forming a chain or range. Mountains are formed primarily by tectonic activity and/or volcanic action but can also be formed by differential erosion.

Muck. Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Mudstone. A blocky or massive, fine grained sedimentary rock in which the proportions of clay and silt are approximately equal. Also, a general term for such material as clay, silt, claystone, siltstone, shale, and argillite and that should be used only when the amounts of clay and silt are not known or cannot be precisely identified.

Munsell notation. A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Natric horizon. A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules. See Redoximorphic features.

Nose slope (geomorphology). A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent. Nose slopes consist dominantly of colluvium and slope-wash sediments (for example, slope alluvium).

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The movement of water through the soil.

Permafrost. Ground, soil, or rock that remains at or below 0 degrees C for at least 2 years. It is defined on the basis of temperature and is not necessarily frozen.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as "saturated hydraulic conductivity," which is defined in the "Soil Survey Manual." In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as "permeability." Terms describing permeability, measured in inches per hour, are as follows:

Impermeable	less than 0.0015 inch
Very slow	0.0015 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)
Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.
Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.
Pitting (in tables). Pits caused by melting around ice. They form on the soil after plant cover is removed.
Plastic limit. The moisture content at which a soil changes from semisolid to plastic.
Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.
Plinthite. The sesquioxide-rich, humus-poor, highly weathered mixture of clay with quartz and other diluents. It commonly appears as red mottles, usually in platy, polygonal, or reticulate patterns. Plinthite changes irreversibly to an ironstone hardpan or to irregular aggregates on repeated wetting and drying, especially if it is exposed also to heat from the sun. In a moist soil, plinthite can be cut with a spade. It is a form of laterite.
Plowpan. A compacted layer formed in the soil directly below the plowed layer.
Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.
Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.
Pore linings. See Redoximorphic features.
Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.
Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.
Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.
Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.
Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key

plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed as pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Redoximorphic concentrations. See Redoximorphic features.

Redoximorphic depletions. See Redoximorphic features.

Redoximorphic features. Redoximorphic features are associated with wetness and result from alternating periods of reduction and oxidation of iron and manganese compounds in the soil. Reduction occurs during saturation with water, and oxidation occurs when the soil is not saturated. Characteristic color patterns are created by these processes. The reduced iron and manganese ions may be removed from a soil if vertical or lateral fluxes of water occur, in which case there is no iron or manganese precipitation in that soil. Wherever the iron and manganese are oxidized and precipitated, they form either soft masses or hard concretions or nodules. Movement of iron and manganese as a result of redoximorphic processes in a soil may result in redoximorphic features that are defined as follows:

1. Redoximorphic concentrations.—These are zones of apparent accumulation of iron-manganese oxides, including:

   A. Nodules and concretions, which are cemented bodies that can be removed from the soil intact. Concretions are distinguished from nodules on the basis of internal organization. A concretion typically has concentric layers that are visible to the naked eye. Nodules do not have visible organized internal structure; *and*

   B. Masses, which are noncemented concentrations of substances within the soil matrix; *and*

   C. Pore linings, i.e., zones of accumulation along pores that may be either coatings on pore surfaces or impregnations from the matrix adjacent to the pores.

2. Redoximorphic depletions.—These are zones of low chroma (chromas less than those in the matrix) where either iron-manganese oxides alone or both iron-manganese oxides and clay have been stripped out, including:

   A. Iron depletions, i.e., zones that contain low amounts of iron and manganese oxides but have a clay content similar to that of the adjacent matrix; *and*

   B. Clay depletions, i.e., zones that contain low amounts of iron, manganese, and clay (often referred to as silt coatings or skeletans).

3. Reduced matrix.—This is a soil matrix that has low chroma *in situ* but undergoes a change in hue or chroma within 30 minutes after the soil material has been exposed to air.

Reduced matrix. See Redoximorphic features.
Relief. The relative difference in elevation between the upland summits and the lowlands or valleys of a given region.
Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as bedrock disintegrated in place.
Rill. A very small, steep-sided channel resulting from erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. A rill generally is not an obstacle to wheeled vehicles and is shallow enough to be smoothed over by ordinary tillage.
Riser. The vertical or steep side slope (e.g., escarpment) of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural, steplike landforms, such as successive stream terraces.
Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.
Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.
Root zone. The part of the soil that can be penetrated by plant roots.
Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.
Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.
Sandstone. Sedimentary rock containing dominantly sand-sized particles.
Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.
Saturated hydraulic conductivity (K_{sat}). See Permeability.
Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.
Scarification. The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.
Sedimentary rock. A consolidated deposit of clastic particles, chemical precipitates, or organic remains accumulated at or near the surface of the earth under normal low temperature and pressure conditions. Sedimentary rocks include consolidated equivalents of alluvium, colluvium, drift, and eolian, lacustrine, and marine deposits. Examples are sandstone, siltstone, mudstone, claystone, shale, conglomerate, limestone, dolomite, and coal.
Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)
Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.
Shale. Sedimentary rock that formed by the hardening of a deposit of clay, silty clay, or silty clay loam and that has a tendency to split into thin layers.
Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.
Shoulder. The convex, erosional surface near the top of a hillslope. A shoulder is a transition from summit to backslope.
Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Side slope (geomorphology). A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel. Side slopes are dominantly colluvium and slope-wash sediments.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone. An indurated silt having the texture and composition of shale but lacking its fine lamination or fissility; a massive mudstone in which silt predominates over clay.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for simple slopes are as follows:

Nearly level	0 to 2 percent
Gently sloping	2 to 8 percent
Strongly sloping	8 to 15 percent

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Sodium adsorption ratio (SAR). A measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration.

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth’s surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief and by the passage of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Strath terrace. A type of stream terrace; formed as an erosional surface cut on bedrock and thinly mantled with stream deposits (alluvium).

Stream terrace. One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel, originally formed near the level of the stream; represents the remnants of an abandoned flood plain, stream bed, or valley floor produced during a former state of fluvial erosion or deposition.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grained* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summit. The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terrace (conservation). An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geomorphology). A steplike surface, bordering a valley floor or shoreline, that represents the former position of a flood plain, lake, or seashore. The term is usually applied both to the relatively flat summit surface (tread) that was cut or built by stream or wave action and to the steeper descending slope (scarp or riser) that has graded to a lower base level of erosion.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.”

Thin layer (in tables). Otherwise suitable soil material that is too thin for the specified use.

Till. Dominantly unsorted and nonstratified drift, generally unconsolidated and deposited directly by a glacier without subsequent reworking by meltwater, and consisting of a heterogeneous mixture of clay, silt, sand, gravel, stones, and boulders; rock fragments of various lithologies are embedded within a finer matrix that can range from clay to sandy loam.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toeslope. The gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Tread. The flat to gently sloping, topmost, laterally extensive slope of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural steplike landforms, such as successive stream terraces.

Tuff. A generic term for any consolidated or cemented deposit that is 50 percent or more volcanic ash.

Upland. An informal, general term for the higher ground of a region, in contrast with a low-lying adjacent area, such as a valley or plain, or for land at a higher elevation than the flood plain or low stream terrace; land above the footslope zone of the hillslope continuum.

Valley fill. The unconsolidated sediment deposited by any agent (water, wind, ice, or mass wasting) so as to fill or partly fill a valley.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Varve. A sedimentary layer or a lamina or sequence of laminae deposited in a body of still water within a year. Specifically, a thin pair of graded glaciolacustrine layers seasonally deposited, usually by meltwater streams, in a glacial lake or other body of still water in front of a glacier.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Weathering. All physical disintegration, chemical decomposition, and biologically induced changes in rocks or other deposits at or near the earth's surface by atmospheric or biologic agents or by circulating surface waters but involving essentially no transport of the altered material.

Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow. The uprooting and tipping over of trees by the wind.

Tables

Temperature and Precipitation

(Recorded in the period 1971-2000 at Laurinburg, NC)

Month	Temperature: Average daily maximum	Temperature: Average daily minimum	Temperature: Average	Temperature: 2 years in 10 will have-- Maximum temperature higher than--	Temperature: 2 years in 10 will have-- Minimum temperature lower than--	Temperature: Average number of growing degree days*	Precipitation: Average	Precipitation: 2 years in 10 will have-- Less than--	Precipitation: 2 years in 10 will have-- More than--	Precipitation: Average number of days with 0.10 inch or more	Precipitation: Average snowfall
	°F	°F	°F	°F	°F	Units	In	In	In		In
January-----	54.2	32.2	43.2	76	10	43	4.31	2.75	5.92	7	0.4
February----	59.1	34.4	46.7	81	14	72	3.59	1.90	5.05	6	0.9
March-------	67.2	41.3	54.2	87	21	194	4.46	2.60	6.14	7	0.6
April-------	76.2	48.2	62.2	93	29	373	2.80	1.12	4.47	4	0.0
May---------	82.9	57.4	70.1	95	39	624	3.33	1.91	4.65	6	0.0
June--------	88.8	65.2	77.0	101	49	810	4.96	2.56	7.44	6	0.0
July--------	91.5	69.5	80.5	101	58	945	5.33	3.25	7.08	8	0.0
August------	89.7	68.2	79.0	101	57	898	4.88	3.20	6.50	7	0.0
September---	84.7	62.4	73.5	97	45	706	4.89	2.07	7.58	5	0.0
October-----	75.7	50.0	62.8	90	30	402	3.39	1.34	5.38	4	0.0
November----	66.2	41.8	54.0	83	22	182	3.07	1.40	4.51	5	0.0
December----	56.9	34.7	45.8	78	14	69	3.28	1.68	4.86	6	0.2
Yearly:											
Average---	74.4	50.4	62.4	---	---	---	---	---	---	---	---
Extreme---	107	-3	---	103	7	---	---	---	---	---	---
Total-----	---	---	---	---	---	5318	48.28	42.54	53.63	71	2.1

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minumum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (50 degrees F).

Freeze Dates in Spring and Fall

(Recorded in the period 1971-2000 at Laurinburg, NC)

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
Last freezing temperature in spring:			
1 year in 10 later than--	Mar. 16	Apr. 7	Apr. 15
2 year in 10 later than--	Mar. 9	Mar. 30	Apr. 9
5 year in 10 later than--	Feb. 25	Mar. 15	Mar. 30
First freezing temperature in fall:			
1 yr in 10 earlier than--	Nov. 13	Oct. 29	Oct. 17
2 yr in 10 earlier than--	Nov. 20	Nov. 4	Oct. 23
5 yr in 10 earlier than--	Dec. 5	Nov. 16	Nov. 3

Growing Season

(Recorded for the period 1971-2000 at Laurinburg, NC)

Probability	Daily Minimum Temperature During growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	Days	Days	Days
9 years in 10	255	214	190
8 years in 10	265	224	199
5 years in 10	282	244	216
2 years in 10	300	263	234
1 year in 10	309	273	243

Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
AeB	Ailey loamy sand, 0 to 8 percent slopes	2,239	1.1
AeC	Ailey loamy sand, 8 to 15 percent slopes	6,842	3.3
AuB	Autryville sand, 0 to 6 percent slopes	20,192	9.8
BaA	Bibb soils, 0 to 2 percent slopes, frequently flooded	2,436	1.2
BlC	Blanton sand, 8 to 15 percent slopes	9,798	4.8
BrB	Bragg loamy sand, 1 to 4 percent slopes	1,510	0.7
CaC	Candor and Wakulla soils, 8 to 15 percent slopes	1,248	0.6
CoA	Coxville loam, 0 to 2 percent slopes	6,021	2.9
DbA	Dunbar fine sandy loam, 0 to 2 percent slopes	3,573	1.7
DpA	Duplin sandy loam, 0 to 2 percent slopes	2,688	1.3
GoA	Goldsboro loamy sand, 0 to 2 percent slopes	1,510	0.7
GrB	Gritney sandy loam, 2 to 6 percent slopes	116	*
GrC	Gritney sandy loam, 6 to 10 percent slopes	55	*
JmA	Johnston soils, 0 to 2 percent slopes, frequently flooded	12,965	6.3
JoA	Johns fine sandy loam, 0 to 2 percent slopes, rarely flooded	1,970	1.0
KaA	Kalmia loamy sand, 0 to 2 percent slopes	271	0.1
KnB	Kenansville loamy sand, moderately wet, 0 to 4 percent slopes	2,293	1.1
LuA	Lumbee sandy loam, 0 to 2 percent slopes, rarely flooded	1,707	0.8
LyA	Lynchburg sandy loam, 0 to 2 percent slopes	2,185	1.1
M-W	Miscellaneous water	68	*
MaA	Mantachie soils, 0 to 2 percent slopes, rarely flooded	626	0.3
McA	McColl loam, 0 to 1 percent slopes, ponded	6,464	3.1
MxA	Maxton loamy sand, 0 to 2 percent slopes	201	*
NcA	Noboco loamy sand, 0 to 2 percent slopes	10,279	5.0
NcB	Noboco loamy sand, 2 to 6 percent slopes	2,462	1.2
NoA	Norfolk loamy sand, 0 to 2 percent slopes	6,455	3.1
NoB	Norfolk loamy sand, 2 to 6 percent slopes	4,542	2.2
OcA	Ocilla loamy sand, 0 to 2 percent slopes	1,156	0.6
OsA	Osier loamy sand, 0 to 2 percent slopes, rarely flooded	662	0.3
PaA	Pactolus loamy sand, 0 to 2 percent slopes	1,112	0.5
PcA	Pamlico and Johnston soils, 0 to 1 percent slopes, frequently flooded	8,007	3.9
PnA	Pantego loam, 0 to 2 percent slopes	1,701	0.8
PoA	Pelion loamy sand, 0 to 2 percent slopes	506	0.2
PoB	Pelion loamy sand, 2 to 6 percent slopes	5,678	2.8
PoC	Pelion loamy sand, 6 to 10 percent slopes	4,191	2.0
PoD	Pelion loamy sand, 10 to 15 percent slopes	930	0.5
PuA	Plummer and Osier soils, 0 to 2 percent slopes	2,626	1.3
PxA	Paxville loam, 0 to 1 percent slopes, rarely flooded	1,120	0.5
RaA	Rains fine sandy loam, 0 to 2 percent slopes	4,872	2.4
RuA	Rutlege loamy sand, 0 to 2 percent slopes, rarely flooded	3,918	1.9
ThA	Thursa loamy sand, 0 to 2 percent slopes	210	0.1
ThB	Thursa loamy sand, 2 to 6 percent slopes	250	0.1
UcC	Uchee loamy sand, 6 to 12 percent slopes	971	0.5
Ud	Udorthents, borrow pits	216	0.1
VaB	Vaucluse loamy sand, 2 to 8 percent slopes	360	0.2
VaC	Vaucluse loamy sand, 8 to 15 percent slopes	1,732	0.8
W	Water	1,435	0.7
WaB	Wagram loamy sand, 0 to 6 percent slopes	17,627	8.6
WcB	Wakulla and Candor soils, 0 to 8 percent slopes	31,930	15.6
WkB	Wakulla and Candor soils, moderately wet, 0 to 8 percent slopes	3,272	1.6
WuB	Wakulla-Rimini complex, 0 to 10 percent slopes	133	*
	Total	205,331	100.0

* Less than 0.1 percent.

Nonirrigated Yields by Map Unit Component (Part 1)

(Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil.)

Map symbol and soil name	Land capability	Corn	Grain sorghum	Oats	Rye	Wheat
		Bu	Bu	Bu	Bu	Bu
AeB:						
Ailey	3s	53.00	24.00	58.00	34.00	34.00
AeC:						
Ailey	4s	49.00	22.00	54.00	31.00	31.00
AuB:						
Autryville	2s	90.00	40.00	75.00	45.00	45.00
BaA:						
Bibb, undrained	5w	---	---	---	---	---
Johnston, undrained	7w	---	---	---	---	---
BlC:						
Blanton	6s	49.00	22.00	54.00	31.00	31.00
BrB:						
Bragg	3e	---	---	---	---	---
CaC:						
Candor	4s	44.00	20.00	48.00	28.00	28.00
Wakulla	3s	61.00	27.00	67.00	39.00	39.00
CoA:						
Coxville, drained	3w	119.00	55.00	94.00	55.00	54.80
Coxville, undrained	4w	---	---	---	---	---
DbA:						
Dunbar, drained	2w	115.00	55.00	94.00	55.00	54.80
Dunbar, undrained	2w	---	---	---	---	---
DpA:						
Duplin	2w	115.00	55.00	102.00	60.00	60.00
GoA:						
Goldsboro	2w	130.00	65.00	110.00	65.00	64.70
GrB:						
Gritney	3e	96.00	43.00	73.00	43.00	43.30
GrC:						
Gritney	4e	92.00	41.00	70.00	41.00	41.00
JmA:						
Johnston, undrained	7w	---	---	---	---	---
Johnston, drained	4w	80.00	35.00	68.00	40.00	39.80
JoA:						
Johns	2w	120.00	55.00	94.00	55.00	55.00
KaA:						
Kalmia	1	110.00	55.00	102.00	60.00	60.00

Nonirrigated Yields by Map Unit Component (Part 1)—Continued

Map symbol and soil name	Land capability	Corn	Grain sorghum	Oats	Rye	Wheat
		Bu	Bu	Bu	Bu	Bu
KnB:						
Kenansville, moderately wet---------------------	2s	79.00	35.00	59.00	35.00	34.70
LuA:						
Lumbee, drained---------	3w	115.00	55.00	85.00	50.00	50.00
Lumbee, undrained-------	6w	---	---	---	---	---
LyA:						
Lynchburg---------------	2w	125.00	60.00	94.00	55.00	55.00
MaA:						
Mantachie---------------	2w	---	---	---	---	---
McA:						
McColl, ponded----------	6w	---	---	---	---	---
McColl, drained---------	3w	100.00	45.00	85.00	50.00	50.00
MxA:						
Maxton------------------	1	110.00	50.00	85.00	50.00	50.00
NcA:						
Noboco------------------	1	115.00	55.00	102.00	60.00	60.00
NcB:						
Noboco------------------	2e	111.00	53.00	99.00	58.00	58.00
NoA:						
Norfolk-----------------	1	115.00	55.00	102.00	60.00	60.00
NoB:						
Norfolk-----------------	2e	113.00	54.00	100.00	59.00	59.00
OcA:						
Ocilla------------------	3w	80.00	35.00	60.00	35.00	35.00
OsA:						
Osier, undrained--------	5w	---	---	---	---	---
PaA:						
Pactolus----------------	3s	65.00	30.00	60.00	35.00	35.00
PcA:						
Pamlico, undrained------	7w	---	---	---	---	---
Johnston, undrained-----	7w	---	---	---	---	---
PnA:						
Pantego, drained--------	3w	111.00	53.00	99.00	58.00	58.00
Pantego, undrained------	6w	---	---	---	---	---
PoA:						
Pelion------------------	2w	100.00	38.00	85.00	50.00	50.00
PoB:						
Pelion------------------	2e	96.00	43.00	82.00	48.00	48.00

Nonirrigated Yields by Map Unit Component (Part 1)—Continued

Map symbol and soil name	Land capability	Corn	Grain sorghum	Oats	Rye	Wheat
		Bu	Bu	Bu	Bu	Bu
PoC:						
Pelion------------------	4e	93.00	41.00	79.00	46.00	46.00
PoD:						
Pelion------------------	6e	90.00	40.00	76.00	45.00	45.00
PuA:						
Plummer, undrained------	4w	---	---	---	---	---
Osier, undrained--------	5w	---	---	---	---	---
PxA:						
Paxville, ponded--------	6w	---	---	---	---	---
Paxville, drained-------	3w	115.00	60.00	94.00	55.00	54.80
RaA:						
Rains, drained----------	3w	125.00	60.00	94.00	55.00	55.00
Rains, undrained--------	4w	---	---	---	---	---
RuA:						
Rutlege, undrained------	5w	---	---	---	---	---
Rutlege, drained--------	4w	80.00	35.00	60.00	35.00	35.00
ThA:						
Thursa------------------	1	119.00	55.00	102.00	60.00	60.00
ThB:						
Thursa------------------	2e	116.00	53.00	99.00	58.00	58.00
UcC:						
Uchee-------------------	3e	68.00	29.00	58.00	34.00	34.00
Ud:						
Udorthents, loamy-------	7e	---	---	---	---	---
VaB:						
Vaucluse----------------	3s	67.00	29.00	72.00	43.00	43.00
VaC:						
Vaucluse----------------	4e	56.00	24.00	61.00	36.00	36.00
WaB:						
Wagram------------------	2s	74.00	34.00	67.00	39.00	39.00
WcB:						
Wakulla-----------------	3s	54.00	25.00	59.00	34.00	34.00
Candor------------------	4s	48.00	22.00	52.00	31.00	31.00
WkB:						
Wakulla, moderately wet-	3s	54.00	25.00	59.00	34.00	34.00
Candor, moderately wet--	3s	48.00	22.00	52.00	31.00	31.00
WuB:						
Wakulla-----------------	3s	54.00	25.00	59.00	34.00	34.00
Rimini------------------	6s	53.00	24.00	50.00	29.00	29.00

Nonirrigated Yields by Map Unit Component (Part 2)

(Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil.)

Map symbol and soil name	Land capability	Cotton lint	Peanuts	Soybeans	Flue-cured tobacco
		Lbs	Lbs	Bu	Lbs
AeB:					
Ailey	3s	534.00	1,943.00	24.00	1,845.00
AeC:					
Ailey	4s	494.00	1,796.00	22.00	1,706.00
AuB:					
Autryville	2s	700.00	2,500.00	30.00	2,400.00
BaA:					
Bibb, undrained	5w	---	---	---	---
Johnston, undrained	7w	---	---	---	---
BlC:					
Blanton	6s	426.00	1,796.00	20.00	1,706.00
BrB:					
Bragg	3e	---	---	---	---
CaC:					
Candor	4s	380.00	1,600.00	18.00	1,520.00
Wakulla	3s	533.00	2,245.00	25.00	2,133.00
CoA:					
Coxville, drained	3w	---	2,191.00	40.00	2,191.00
Coxville, undrained	4w	---	---	---	---
DbA:					
Dunbar, drained	2w	600.00	2,589.00	42.00	2,589.00
Dunbar, undrained	2w	---	---	---	---
DpA:					
Duplin	2w	797.00	2,987.00	45.00	2,788.00
GoA:					
Goldsboro	2w	925.00	4,000.00	45.00	3,400.00
GrB:					
Gritney	3e	649.00	2,308.00	34.00	2,404.00
GrC:					
Gritney	4e	621.00	2,208.00	32.00	2,300.00
JmA:					
Johnston, undrained	7w	---	---	---	---
Johnston, drained	4w	573.00	2,191.00	35.00	1,792.00
JoA:					
Johns	2w	797.00	2,689.00	45.00	2,689.00
KaA:					
Kalmia	1	825.00	3,200.00	42.00	2,900.00

Nonirrigated Yields by Map Unit Component (Part 2)—Continued

Map symbol and soil name	Land capability	Cotton lint	Peanuts	Soybeans	Flue-cured tobacco
		Lbs	Lbs	Bu	Lbs
KnB:					
Kenansville, moderately wet	2s	644.00	2,576.00	30.00	2,180.00
LuA:					
Lumbee, drained	3w	726.00	2,202.00	45.00	4.00
Lumbee, undrained	6w	---	---	---	---
LyA:					
Lynchburg	2w	850.00	3,000.00	46.00	3,000.00
MaA:					
Mantachie	2w	---	---	---	---
McA:					
McColl, ponded	6w	---	---	---	---
McColl, drained	3w	700.00	---	38.00	2,000.00
MxA:					
Maxton	1	797.00	---	40.00	2,888.00
NcA:					
Noboco	1	871.00	3,983.00	45.00	3,286.00
NcB:					
Noboco	2e	846.00	3,866.00	43.00	3,189.00
NoA:					
Norfolk	1	870.00	4,000.00	42.00	3,300.00
NoB:					
Norfolk	2e	858.00	3,920.00	41.00	3,234.00
OcA:					
Ocilla	3w	600.00	2,800.00	34.00	2,200.00
OsA:					
Osier, undrained	5w	---	---	---	---
PaA:					
Pactolus	3s	550.00	2,400.00	25.00	2,000.00
PcA:					
Pamlico, undrained	7w	---	---	---	---
Johnston, undrained	7w	---	---	---	---
PnA:					
Pantego, drained	3w	846.00	3,866.00	41.00	3,189.00
Pantego, undrained	6w	---	---	---	---
PoA:					
Pelion	2w	722.00	---	38.00	1,892.00
PoB:					
Pelion	2e	697.00	---	37.00	1,827.00
PoC:					
Pelion	4e	674.00	---	35.00	1,767.00

Nonirrigated Yields by Map Unit Component (Part 2)—Continued

Map symbol and soil name	Land capability	Cotton lint	Peanuts	Soybeans	Flue-cured tobacco
		Lbs	Lbs	Bu	Lbs
PoD:					
Pelion-------------------	6e	651.00	---	34.00	1,706.00
PuA:					
Plummer, undrained------	4w	---	---	---	---
Osier, undrained--------	5w	---	---	---	---
PxA:					
Paxville, ponded--------	6w	---	---	---	---
Paxville, drained-------	3w	647.00	2,888.00	40.00	---
RaA:					
Rains, drained----------	3w	800.00	2,900.00	44.00	2,600.00
Rains, undrained--------	4w	---	---	---	---
RuA:					
Rutlege, undrained------	5w	---	---	---	---
Rutlege, drained--------	4w	548.00	---	30.00	1,792.00
ThA:					
Thursa------------------	1	896.00	2,788.00	45.00	2,888.00
ThB:					
Thursa------------------	2e	870.00	2,706.00	43.00	2,803.00
UcC:					
Uchee-------------------	3e	532.00	1,933.00	29.00	1,933.00
Ud:					
Udorthents, loamy-------	7e	---	---	---	---
VaB:					
Vaucluse----------------	3s	570.00	---	27.00	2,185.00
VaC:					
Vaucluse----------------	4e	480.00	---	22.00	1,840.00
WaB:					
Wagram------------------	2s	637.00	2,940.00	27.00	2,548.00
WcB:					
Wakulla-----------------	3s	539.00	2,156.00	22.00	1,960.00
Candor------------------	4s	480.00	1,923.00	19.00	1,749.00
WkB:					
Wakulla, moderately wet-	3s	539.00	2,156.00	22.00	1,960.00
Candor, moderately wet--	3s	480.00	1,923.00	19.00	1,749.00
WuB:					
Wakulla-----------------	3s	539.00	2,156.00	22.00	1,960.00
Rimini------------------	6s	437.00	1,943.00	21.00	1,554.00

Nonirrigated Yields by Map Unit Component (Part 3)

(Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil.)

Map symbol and soil name	Land capability	Bahiagrass hay	Common bermudagrass	Improved bermudagrass	Tall fescue hay
		Tons	Tons	Tons	Tons
AeB:					
Ailey	3s	---	3.60	4.80	1.50
AeC:					
Ailey	4s	---	3.00	4.00	1.30
AuB:					
Autryville	2s	---	4.10	5.50	1.60
BaA:					
Bibb, undrained	5w	---	---	---	---
Johnston, undrained	7w	---	---	---	---
BlC:					
Blanton	6s	---	3.10	4.20	---
BrB:					
Bragg	3e	3.30	3.30	4.40	---
CaC:					
Candor	4s	---	2.70	3.60	---
Wakulla	3s	---	2.30	3.10	---
CoA:					
Coxville, drained	3w	---	2.60	3.50	3.50
Coxville, undrained	4w	---	---	---	---
DbA:					
Dunbar, drained	2w	---	3.80	5.00	4.00
Dunbar, undrained	2w	---	---	---	---
DpA:					
Duplin	2w	---	4.10	5.50	3.50
GoA:					
Goldsboro	2w	---	4.90	6.50	4.00
GrB:					
Gritney	3e	---	4.00	5.40	3.40
GrC:					
Gritney	4e	---	3.80	5.10	3.20
JmA:					
Johnston, undrained	7w	---	---	---	---
Johnston, drained	4w	---	2.30	3.00	3.00
JoA:					
Johns	2w	---	3.80	5.00	5.00
KaA:					
Kalmia	1	---	4.90	6.50	3.50

Nonirrigated Yields by Map Unit Component (Part 3)—Continued

Map symbol and soil name	Land capability	Bahiagrass hay	Common bermudagrass	Improved bermudagrass	Tall fescue hay
		Tons	Tons	Tons	Tons
KnB:					
Kenansville, moderately wet	2s	---	4.10	5.50	1.50
LuA:					
Lumbee, drained	3w	---	3.40	4.50	---
Lumbee, undrained	6w	---	---	---	---
LyA:					
Lynchburg	2w	---	4.10	5.50	4.50
MaA:					
Mantachie	2w	---	---	---	---
McA:					
McColl, ponded	6w	---	---	---	---
McColl, drained	3w	---	3.00	4.00	3.50
MxA:					
Maxton	1	---	4.90	6.50	3.50
NcA:					
Noboco	1	---	4.90	6.50	3.50
NcB:					
Noboco	2e	---	4.70	6.40	3.40
NoA:					
Norfolk	1	---	4.90	6.50	3.50
NoB:					
Norfolk	2e	---	4.80	6.40	3.40
OcA:					
Ocilla	3w	---	3.80	5.00	3.00
OsA:					
Osier, undrained	5w	---	---	---	---
PaA:					
Pactolus	3s	---	3.80	5.00	2.50
PcA:					
Pamlico, undrained	7w	---	---	---	---
Johnston, undrained	7w	---	---	---	---
PnA:					
Pantego, drained	3w	---	3.80	5.00	3.40
Pantego, undrained	6w	---	---	---	---
PoA:					
Pelion	2w	---	3.80	5.00	3.50
PoB:					
Pelion	2e	---	3.70	4.90	3.40
PoC:					
Pelion	4e	---	3.50	4.60	3.20

Nonirrigated Yields by Map Unit Component (Part 3)—Continued

Map symbol and soil name	Land capability	Bahiagrass hay	Common bermudagrass	Improved bermudagrass	Tall fescue hay
		Tons	Tons	Tons	Tons
PoD:					
Pelion------------------	6e	---	3.00	4.00	3.10
PuA:					
Plummer, undrained------	4w	---	---	---	---
Osier, undrained--------	5w	---	---	---	---
PxA:					
Paxville, ponded--------	6w	---	---	---	---
Paxville, drained-------	3w	---	3.50	4.50	3.50
RaA:					
Rains, drained----------	3w	---	3.40	4.50	4.50
Rains, undrained--------	4w	---	---	---	---
RuA:					
Rutlege, undrained------	5w	---	---	---	---
Rutlege, drained--------	4w	---	2.30	4.50	3.00
ThA:					
Thursa------------------	1	---	4.90	6.50	4.00
ThB:					
Thursa------------------	2e	---	4.70	6.40	3.90
UcC:					
Uchee-------------------	3e	---	3.70	4.40	1.40
Ud:					
Udorthents, loamy-------	7e	---	---	---	---
VaB:					
Vaucluse----------------	3s	---	3.90	5.20	2.90
VaC:					
Vaucluse----------------	4e	---	3.30	4.40	2.40
WaB:					
Wagram------------------	2s	---	4.00	5.40	1.50
WcB:					
Wakulla-----------------	3s	---	2.90	3.90	---
Candor------------------	4s	---	2.90	4.30	---
WkB:					
Wakulla, moderately wet-	3s	---	2.90	3.90	---
Candor, moderately wet--	3s	---	2.90	4.30	---
WuB:					
Wakulla-----------------	3s	---	2.90	3.90	---
Rimini------------------	6s	---	3.40	5.00	---

Prime Farmland and Other Important Farmlands

(Only the soils considered prime or important farmland are listed. Urban or built-up areas of the soils listed are not considered prime or important farmland. If a soil is prime or important farmland only under certain conditions, the conditions are specified in parentheses after the soil name.)

Map symbol	Map unit name	Farmland classification
DpA	Duplin sandy loam, 0 to 2 percent slopes	Prime farmland in all areas
GoA	Goldsboro loamy sand, 0 to 2 percent slopes	Prime farmland in all areas
GrB	Gritney sandy loam, 2 to 6 percent slopes	Prime farmland in all areas
KaA	Kalmia loamy sand, 0 to 2 percent slopes	Prime farmland in all areas
MxA	Maxton loamy sand, 0 to 2 percent slopes	Prime farmland in all areas
NcA	Noboco loamy sand, 0 to 2 percent slopes	Prime farmland in all areas
NcB	Noboco loamy sand, 2 to 6 percent slopes	Prime farmland in all areas
NoA	Norfolk loamy sand, 0 to 2 percent slopes	Prime farmland in all areas
NoB	Norfolk loamy sand, 2 to 6 percent slopes	Prime farmland in all areas
PoA	Pelion loamy sand, 0 to 2 percent slopes	Prime farmland in all areas
ThA	Thursa loamy sand, 0 to 2 percent slopes	Prime farmland in all areas
ThB	Thursa loamy sand, 2 to 6 percent slopes	Prime farmland in all areas
AeB	Ailey sand, 0 to 8 percent slopes	Farmland of statewide importance
AeC	Ailey sand, 8 to 15 percent slopes	Farmland of statewide importance
AuB	Autryville sand, 0 to 6 percent slopes	Farmland of statewide importance
CoA	Coxville loam, 0 to 2 percent slopes	Farmland of statewide importance
DbA	Dunbar fine sandy loam, 0 to 2 percent slopes	Farmland of statewide importance
GrC	Gritney sandy loam, 6 to 10 percent slopes	Farmland of statewide importance
KnB	Kenansville loamy sand, moderately wet, 0 to 4 percent slopes	Farmland of statewide importance
OcA	Ocilla loamy sand, 0 to 2 percent slopes	Farmland of statewide importance
UcC	Uchee loamy sand, 6 to 12 percent slopes	Farmland of statewide importance
VaB	Vaucluse loamy sand, 2 to 8 percent slopes	Farmland of statewide importance
WaB	Wagram loamy sand, 0 to 6 percent slopes	Farmland of statewide importance
JoA	Johns fine sandy loam, 0 to 2 percent slopes, rarely flooded	Prime farmland if drained
LuA	Lumbee fine sandy loam, 0 to 2 percent slopes, rarely flooded	Prime farmland if drained
LyA	Lynchburg sandy loam, 0 to 2 percent slopes	Prime farmland if drained
MaA	Mantachie soils, 0 to 2 percent slopes, rarely flooded	Prime farmland if drained
PnA	Pantego loam, 0 to 2 percent slopes	Prime farmland if drained
RaA	Rains fine sandy loam, 0 to 2 percent slopes	Prime farmland if drained
PxA	Paxville loam, 0 to 1 percent slopes, rarely flooded	Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
AeB:				
Ailey	Very limited		Very limited	
	Droughty	1.00	Droughty	1.00
	Filtering capacity	0.99	Filtering capacity	0.99
	Too acid	0.22	Too acid	0.77
AeC:				
Ailey	Very limited		Very limited	
	Droughty	1.00	Droughty	1.00
	Filtering capacity	0.99	Filtering capacity	0.99
	Slope	0.63	Too acid	0.77
AuB:				
Autryville	Very limited		Very limited	
	Filtering capacity	0.99	Filtering capacity	0.99
	Leaching	0.45	Too acid	0.77
	Too acid	0.22		
BaA:				
Bibb, undrained	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	1.00
	Too acid	0.73	Too acid	1.00
BlC:				
Blanton	Very limited		Very limited	
	Filtering capacity	0.99	Filtering capacity	0.99
	Slope	0.84	Too acid	0.91
	Leaching	0.45	Slope	0.84
BrB:				
Bragg	Very limited		Very limited	
	Filtering capacity	0.99	Filtering capacity	0.99
	Too acid	0.32	Too acid	0.91
	Slow water movement	0.30	Slow water movement	0.22
CaC:				
Candor	Very limited		Very limited	
	Filtering capacity	0.99	Too acid	1.00
	Slope	0.63	Filtering capacity	0.99
	Too acid	0.62	Slope	0.63

Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
Wakulla-------------	Very limited		Very limited	
	Filtering capacity	0.99	Filtering capacity	0.99
	Droughty	0.96	Droughty	0.96
	Slope	0.63	Too acid	0.91
CoA:				
Coxville, drained---	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	0.68	Too acid	1.00
	Low adsorption	0.65	Slow water movement	0.22
Coxville, undrained-	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	0.68	Too acid	1.00
	Low adsorption	0.65	Slow water movement	0.22
DbA:				
Dunbar, drained-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	0.50	Too acid	0.99
	Slow water movement	0.30	Slow water movement	0.22
Dunbar, undrained---	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	0.50	Too acid	0.99
	Runoff	0.40	Slow water movement	0.22
DpA:				
Duplin--------------	Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.86	Depth to saturated zone	0.86
	Low adsorption	0.42	Too acid	0.07
	Too acid	0.02		
GoA:				
Goldsboro-----------	Very limited		Very limited	
	Filtering capacity	0.99	Too acid	1.00
	Depth to saturated zone	0.86	Filtering capacity	0.99
	Too acid	0.68	Depth to saturated zone	0.86
GrB, GrC:				
Gritney-------------	Very limited		Very limited	
	Slow water movement	1.00	Slow water movement	1.00
	Depth to saturated zone	0.95	Too acid	1.00
	Too acid	0.62	Depth to saturated zone	0.95

Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
JmA:				
Johnston, undrained	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	1.00
Johnston, drained	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	1.00
JoA:				
Johns	Somewhat limited		Very limited	
	Depth to saturated zone	0.95	Too acid	1.00
	Droughty	0.73	Depth to saturated zone	0.95
	Too acid	0.68	Droughty	0.73
KaA:				
Kalmia	Very limited		Very limited	
	Filtering capacity	0.99	Too acid	1.00
	Droughty	0.91	Filtering capacity	0.99
	Too acid	0.68	Droughty	0.91
KnB:				
Kenansville, moderately wet	Very limited		Very limited	
	Very limited		Very limited	
	Filtering capacity	0.99	Filtering capacity	0.99
	Droughty	0.38	Too acid	0.91
	Too acid	0.32	Droughty	0.38
LuA:				
Lumbee, drained	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Droughty	0.89	Too acid	1.00
	Leaching	0.70	Droughty	0.89
Lumbee, undrained	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Droughty	0.89	Too acid	1.00
LyA:				
Lynchburg	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Leaching	0.70	Too acid	1.00
	Too acid	0.68		

Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
MaA:				
Mantachie	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Leaching	0.70	Too acid	0.99
	Too acid	0.50	Flooding	0.40
McA:				
McColl, ponded	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Dense layer	1.00	Droughty	0.99
McColl, drained	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Dense layer	1.00	Droughty	0.99
	Droughty	0.99	Depth to cemented pan	0.68
MxA:				
Maxton	Somewhat limited		Somewhat limited	
	Droughty	0.82	Too acid	0.91
	Strongly contrasting textural stratification	0.46	Droughty	0.82
	Too acid	0.32	Strongly contrasting textural stratification	0.46
NcA, NcB:				
Noboco	Very limited		Very limited	
	Filtering capacity	0.99	Filtering capacity	0.99
	Depth to saturated zone	0.86	Too acid	0.91
	Too acid	0.32	Depth to saturated zone	0.86
NoA, NoB:				
Norfolk	Very limited		Very limited	
	Dense layer	1.00	Too acid	1.00
	Filtering capacity	0.99	Filtering capacity	0.99
	Too acid	0.62		
OcA:				
Ocilla	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Leaching	0.70	Too acid	0.99
	Too acid	0.50		
OsA:				
Osier, undrained	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Leaching	0.90	Too acid	1.00

Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
PaA:				
Pactolus	Very limited		Very limited	
	Filtering capacity	0.99	Too acid	1.00
	Depth to saturated zone	0.95	Filtering capacity	0.99
	Too acid	0.78	Depth to saturated zone	0.95
PcA:				
Pamlico, undrained	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	1.00
Johnston, undrained	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	1.00
PnA:				
Pantego, drained	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	0.78	Too acid	1.00
	Leaching	0.70	Flooding	0.40
Pantego, undrained	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	0.78	Too acid	1.00
	Leaching	0.70	Flooding	0.40
PoA, PoB, PoC, PoD:				
Pelion	Very limited		Very limited	
	Depth to saturated zone	1.00	Droughty	1.00
	Droughty	1.00	Depth to saturated zone	1.00
	Filtering capacity	0.99	Filtering capacity	0.99
PuA:				
Plummer, undrained	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Filtering capacity	0.99	Too acid	1.00
	Leaching	0.90	Filtering capacity	0.99
Osier, undrained	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	1.00

Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Application of manure and food-processing waste		Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features	Value
PxA:				
Paxville, ponded----	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	1.00
Paxville, drained---	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	1.00
	Filtering capacity	0.99	Filtering capacity	0.99
RaA:				
Rains, drained------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	0.43	Too acid	0.99
Rains, undrained----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	0.43	Too acid	0.99
	Runoff	0.40		
RuA:				
Rutlege, undrained--	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Filtering capacity	0.99	Too acid	1.00
	Too acid	0.73	Filtering capacity	0.99
Rutlege, drained----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Filtering capacity	0.99	Too acid	1.00
	Too acid	0.73	Filtering capacity	0.99
ThA, ThB:				
Thursa--------------	Somewhat limited		Somewhat limited	
	Low adsorption	0.58	Too acid	0.31
	Too acid	0.08	Low adsorption	0.13
UcC:				
Uchee---------------	Very limited		Very limited	
	Filtering capacity	0.99	Filtering capacity	0.99
	Too acid	0.50	Too acid	0.99
	Slow water movement	0.30	Slow water movement	0.22
Ud:				
Udorthents, loamy---	Somewhat limited		Somewhat limited	
	Low adsorption	0.76	Too acid	0.91
	Too acid	0.32	Low adsorption	0.76

Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
VaB:				
Vaucluse	Very limited		Very limited	
	Droughty	1.00	Droughty	1.00
	Filtering capacity	0.99	Filtering capacity	0.99
	Depth to cemented pan	0.54	Too acid	0.91
VaC:				
Vaucluse	Very limited		Very limited	
	Droughty	1.00	Droughty	1.00
	Filtering capacity	0.99	Filtering capacity	0.99
	Slope	0.63	Too acid	0.91
WaB:				
Wagram	Very limited		Very limited	
	Filtering capacity	0.99	Filtering capacity	0.99
	Too acid	0.32	Too acid	0.91
WcB:				
Wakulla	Very limited		Very limited	
	Filtering capacity	0.99	Filtering capacity	0.99
	Droughty	0.96	Droughty	0.96
	Leaching	0.45	Too acid	0.91
Candor	Very limited		Very limited	
	Filtering capacity	0.99	Too acid	1.00
	Too acid	0.62	Filtering capacity	0.99
	Leaching	0.45	Droughty	0.04
WkB:				
Wakulla, moderately wet	Very limited		Very limited	
	Filtering capacity	0.99	Filtering capacity	0.99
	Droughty	0.96	Droughty	0.96
	Leaching	0.45	Too acid	0.91
Candor, moderately wet	Very limited		Very limited	
	Filtering capacity	0.99	Too acid	1.00
	Too acid	0.62	Filtering capacity	0.99
	Leaching	0.45	Droughty	0.04
WuB:				
Wakulla	Very limited		Very limited	
	Filtering capacity	0.99	Filtering capacity	0.99
	Droughty	0.96	Droughty	0.96
	Leaching	0.45	Too acid	0.91

Agricultural Disposal of Manure, Food-Processing Waste, and Sewage Sludge—Continued

Map symbol and soil name	Application of manure and food-processing waste		Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features	Value
Rimini	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Droughty	0.92	Too acid	1.00
	Too acid	0.62	Droughty	0.92

Agricultural Disposal of Wastewater by Irrigation and Overland Flow

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Disposal of wastewater by irrigation		Overland flow of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
AeB:				
Ailey	Very limited		Very limited	
	Droughty	1.00	Seepage	1.00
	Filtering capacity	0.99	Depth to cemented pan	1.00
	Too acid	0.77	Too acid	0.77
AeC:				
Ailey	Very limited		Very limited	
	Droughty	1.00	Seepage	1.00
	Too steep for surface application	1.00	Depth to cemented pan	1.00
	Filtering capacity	0.99	Too steep for surface application	1.00
AuB:				
Autryville	Very limited		Very limited	
	Filtering capacity	0.99	Seepage	1.00
	Too acid	0.77	Too acid	0.77
BaA:				
Bibb, undrained	Very limited		Very limited	
	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Seepage	1.00
	Too acid	1.00	Depth to saturated zone	1.00
BlC:				
Blanton	Very limited		Very limited	
	Too steep for surface application	1.00	Seepage	1.00
	Filtering capacity	0.99	Too steep for surface application	1.0
	Too acid	0.91	Too acid	0.91
BrB:				
Bragg	Very limited		Very limited	
	Filtering capacity	0.99	Seepage	1.00
	Too acid	0.91	Too acid	0.91
	Slow water movement	0.22	Too acid	0.91
			Low adsorption	0.18
CaC:				
Candor	Very limited		Very limited	
	Too steep for surface application	1.00	Seepage	1.00
	Too acid	1.00	Too steep for surface application	1.00
	Filtering capacity	0.99	Too acid	1.00

Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Disposal of wastewater by irrigation		Overland flow of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
Wakulla-------------	Very limited		Very limited	
	Too steep for surface application	1.00	Seepage	1.00
	Filtering capacity	0.99	Too steep for surface application	1.00
	Droughty	0.96	Too acid	0.91
CoA:				
Coxville, drained---	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	1.00	Seepage	1.00
	Low adsorption	0.65	Too acid	1.00
Coxville, undrained-	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	1.00	Seepage	1.00
	Low adsorption	0.65	Too acid	1.00
DbA:				
Dunbar, drained-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Too acid	0.99	Depth to saturated zone	1.00
	Slow water movement	0.22	Too acid	0.99
Dunbar, undrained---	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Too acid	0.99	Depth to saturated zone	1.00
	Slow water movement	0.22	Too acid	0.99
DpA:				
Duplin--------------	Somewhat limited		Very limited	
	Depth to saturated zone	0.86	Seepage	1.00
	Low adsorption	0.42	Depth to saturated zone	0.86
	Too acid	0.07	Low adsorption	0.42
GoA:				
Goldsboro-----------	Very limited		Very limited	
	Too acid	1.00	Seepage	1.00
	Filtering capacity	0.99	Too acid	1.00
	Depth to saturated zone	0.86	Depth to saturated zone	0.86
GrB, GrC:				
Gritney-------------	Very limited		Very limited	
	Slow water movement	1.00	Seepage	1.00
	Too acid	1.00	Too acid	1.00
	Depth to saturated zone	0.95	Depth to saturated zone	0.95

Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Disposal of wastewater by irrigation		Overland flow of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
JmA:				
Johnston, undrained	Very limited		Very limited	
	Ponding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Flooding	1.00	Ponding	1.00
Johnston, drained	Very limited		Very limited	
	Ponding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Flooding	1.00	Ponding	1.00
JoA:				
Johns	Very limited		Very limited	
	Too acid	1.00	Seepage	1.00
	Depth to saturated zone	0.95	Too acid	1.00
	Droughty	0.73	Depth to saturated zone	0.95
KaA:				
Kalmia	Very limited		Very limited	
	Too acid	1.00	Seepage	1.00
	Filtering capacity	0.99	Too acid	1.00
	Droughty	0.91	Low adsorption	0.12
KnB:				
Kenansville, moderately wet	Very limited		Very limited	
	Filtering capacity	0.99	Seepage	1.00
	Too acid	0.91	Too acid	0.9
	Droughty	0.38		
LuA:				
Lumbee, drained	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	1.00	Seepage	1.00
	Droughty	0.89	Too acid	1.00
Lumbee, undrained	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	1.00	Seepage	1.00
LyA:				
Lynchburg	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	1.00	Seepage	1.00
	Low adsorption	0.01	Too acid	1.00

Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Disposal of wastewater by irrigation		Overland flow of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
MaA:				
Mantachie-----------	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Too acid	0.99	Depth to saturated zone	1.00
			Too acid	0.99
McA:				
McColl, ponded------	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Droughty	0.99	Depth to cemented pan	1.00
McColl, drained-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Droughty	0.99	Depth to cemented pan	1.00
	Depth to cemented pan	0.68	Seepage	1.00
MxA:				
Maxton--------------	Somewhat limited		Very limited	
	Too acid	0.91	Seepage	1.00
	Droughty	0.82	Too acid	0.91
NcA, NcB:				
Noboco--------------	Very limited		Very limited	
	Filtering capacity	0.99	Seepage	1.00
	Too acid	0.91	Too acid	0.91
	Depth to saturated zone	0.86	Depth to saturated zone	0.86
NoA:				
Norfolk-------------	Very limited		Very limited	
	Too acid	1.00	Seepage	1.00
	Filtering capacity	0.99	Too acid	1.00
NoB:				
Norfolk-------------	Very limited		Very limited	
	Too acid	1.00	Seepage	1.00
	Filtering capacity	0.99	Too acid	1.00
	Too steep for surface application	0.08		
OcA:				
Ocilla--------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Too acid	0.99	Depth to saturated zone	1.00
			Too acid	0.99

Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
OsA:				
Osier, undrained----	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Depth to saturated zone	1.00	Depth to	1.00
	Too acid	1.00	Depth to saturated zone	1.00
			Too acid	1.00
PaA:				
Pactolus------------	Very limited		Very limited	
	Too acid	1.00	Seepage	1.00
	Filtering capacity	0.99	Too acid	1.00
	Depth to saturated zone	0.95	Depth to saturated zone	0.95
PcA:				
Pamlico, undrained--	Very limited		Very limited	
	Ponding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Ponding	1.00
	Flooding	1.00	Depth to saturated zone	1.00
Johnston, undrained-	Very limited		Very limited	
	Ponding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Flooding	1.00	Ponding	1.00
PnA:				
Pantego, drained----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Too acid	1.00	Depth to saturated zone	1.00
			Too acid	1.00
Pantego, undrained--	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Too acid	1.00	Depth to saturated zone	1.00
			Too acid	1.00
PoA, PoB:				
Pelion--------------	Very limited		Very limited	
	Droughty	1.00	Seepage	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Filtering capacity	0.99	Depth to cemented pan	1.00
PoC, PoD:				
Pelion--------------	Very limited		Very limited	
	Droughty	1.00	Seepage	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too steep for surface application	1.00	Depth to cemented pan	1.00

Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
PuA:				
Plummer, undrained--	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Too acid	1.00	Depth to saturated zone	1.00
	Filtering capacity	0.99	Too acid	1.00
Osier, undrained----	Very limited		Very limited	
	Filtering capacity	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Flooding	1.00	Depth to saturated zone	1.00
PxA:				
Paxville, ponded----	Very limited		Very limited	
	Ponding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Flooding	1.00	Ponding	1.00
Paxville, drained---	Very limited		Very limited	
	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Seepage	1.00
	Filtering capacity	0.99	Depth to saturated zone	1.00
RaA:				
Rains, drained------	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Too acid	0.99	Depth to saturated zone	1.00
			Too acid	0.99
Rains, undrained----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Too acid	0.99	Depth to saturated zone	1.00
			Too acid	0.99
RuA:				
Rutlege, undrained--	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Too acid	1.00	Depth to saturated zone	1.00
	Filtering capacity	0.99	Too acid	1.00
Rutlege, drained----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Too acid	1.00	Depth to saturated zone	1.00
	Filtering capacity	0.99	Too acid	1.00

Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
ThA, ThB:				
Thursa	Somewhat limited		Very limited	
	Low adsorption	0.58	Seepage	1.00
	Too acid	0.31	Low adsorption	0.58
			Too acid	0.31
UcC:				
Uchee	Very limited		Very limited	
	Too steep for surface application	1.00	Seepage	1.00
			Too acid	0.99
			Too steep for surface application	0.50
	Filtering capacity	0.99		
	Too acid	0.99		
Ud:				
Udorthents, loamy	Somewhat limited		Very limited	
	Too steep for surface application	0.92	Seepage	1.00
			Too acid	0.91
			Low adsorption	0.76
	Too acid	0.91		
	Low adsorption	0.76		
VaB:				
Vaucluse	Very limited		Very limited	
	Droughty	1.00	Seepage	1.00
	Filtering capacity	0.99	Depth to cemented pan	1.00
	Too acid	0.91	Too acid	0.91
VaC:				
Vaucluse	Very limited		Very limited	
	Too steep for surface application	1.00	Seepage	1.00
			Depth to cemented pan	1.00
	Droughty	1.00	Too steep for surface application	1.00
	Filtering capacity	0.99		
WaB:				
Wagram	Very limited		Very limited	
	Filtering capacity	0.99	Seepage	1.00
			Too acid	0.91
	Too acid	0.91		
WcB:				
Wakulla	Very limited		Very limited	
	Filtering capacity	0.99	Seepage	1.00
			Too acid	0.91
	Droughty	0.96		
	Too acid	0.91		
Candor	Very limited		Very limited	
	Too acid	1.00	Seepage	1.00
	Filtering capacity	0.99	Too acid	1.00
	Too steep for surface application	0.08		

Agricultural Disposal of Wastewater by Irrigation and Overland Flow—Continued

Map symbol and soil name	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
WkB:				
Wakulla, moderately wet	Very limited		Very limited	
	Filtering capacity	0.99	Seepage	1.00
			Too acid	0.91
	Droughty	0.96		
	Too acid	0.91		
Candor, moderately wet	Very limited		Very limited	
	Too acid	1.00	Seepage	1.00
	Filtering capacity	0.99	Too acid	1.00
	Too steep for surface application	0.08		
WuB:				
Wakulla	Very limited		Very limited	
	Filtering capacity	0.99	Seepage	1.00
	Droughty	0.96	Too acid	0.91
	Too acid	0.91		
Rimini	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Too acid	1.00	Too acid	1.00
	Droughty	0.92		

Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
AeB:				
Ailey	Very limited		Very limited	
	Depth to cemented pan	1.00	Depth to cemented pan	1.00
	Slow water movement	1.00	Filtering capacity	0.99
	Slope	0.12	Too acid	0.77
AeC:				
Ailey	Very limited		Very limited	
	Slope	1.00	Depth to cemented pan	1.00
	Depth to cemented pan	1.00	Too steep for surface application	1.00
	Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
AuB:				
Autryville	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	0.99
	Slow water movement	0.32	Too acid	0.77
BaA:				
Bibb, undrained	Very limited		Very limited	
	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Flooding	1.00
	Slow water movement	0.32	Too acid	1.00
BlC:				
Blanton	Very limited		Very limited	
	Slope	1.00	Too steep for surface application	1.00
	Slow water movement	0.32	Too steep for sprinkler irrigation	1.00
			Filtering capacity	0.99
BrB:				
Bragg	Very limited		Very limited	
	Slow water movement	1.00	Filtering capacity	0.99
			Too acid	0.91
			Low adsorption	0.18

Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
CaC:				
Candor	Very limited		Very limited	
	Slope	1.00	Too steep for surface application	1.00
	Slow water movement	1.00		
	Too acid	0.14	Too steep for sprinkler irrigation	1.00
			Too acid	1.00
Wakulla	Very limited		Very limited	
	Slope	1.00	Too steep for surface application	1.00
			Too steep for sprinkler irrigation	1.00
			Filtering capacity	0.99
CoA:				
Coxville, drained	Very limited		Very limited	
	Slow water movement	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Too acid	1.00
			Low adsorption	0.65
	Too acid	0.07		
Coxville, undrained	Very limited		Very limited	
	Slow water movement	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Too acid	1.00
			Low adsorption	0.65
	Too acid	0.07		
DbA:				
Dunbar, drained	Very limited		Very limited	
	Slow water movement	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Too acid	0.99
			Low adsorption	0.16
	Too acid	0.07		
Dunbar, undrained	Very limited		Very limited	
	Slow water movement	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Too acid	0.99
	Too acid	0.07	Low adsorption	0.16
DpA:				
Duplin	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.86
	Slow water movement	0.32	Low adsorption	0.42
			Too acid	0.07

Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
GoA:				
Goldsboro	Very limited		Very limited	
	Depth to saturated zone	1.00	Too acid	1.00
	Slow water movement	1.00	Filtering capacity	0.99
	Too acid	0.07	Depth to saturated zone	0.86
GrB:				
Gritney	Very limited		Very limited	
	Slow water movement	1.00	Too acid	1.00
	Depth to saturated zone	0.95	Depth to saturated zone	0.95
	Too acid	0.21	Slow water movement	0.94
GrC:				
Gritney	Very limited		Very limited	
	Slow water movement	1.00	Too acid	1.00
	Depth to saturated zone	0.95	Depth to saturated zone	0.95
	Slope	0.88	Slow water movement	0.94
JmA:				
Johnston, undrained	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Flooding	1.00
Johnston, drained	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Flooding	1.00
JoA:				
Johns	Very limited		Very limited	
	Depth to saturated zone	1.00	Too acid	1.00
	Slow water movement	0.62	Depth to saturated zone	0.95
	Too acid	0.07	Low adsorption	0.01
KaA:				
Kalmia	Somewhat limited		Very limited	
	Too acid	0.07	Too acid	1.00
			Filtering capacity	0.99
			Low adsorption	0.12

Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
KnB:				
Kenansville, moderately wet-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	0.99
	Slow water movement	0.62	Too acid	0.91
LuA:				
Lumbee, drained-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.62	Too acid	1.00
	Too acid	0.07		
Lumbee, undrained---	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.62	Too acid	1.00
LyA:				
Lynchburg-----------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Too acid	1.00
			Low adsorption	0.01
	Too acid	0.07		
MaA:				
Mantachie-----------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Too acid	0.99
McA:				
McColl, ponded------	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Slow water movement	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to cemented pan	1.00
McColl, drained-----	Very limited		Very limited	
	Slow water movement	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to cemented pan	1.00
	Depth to cemented pan	1.00	Too acid	0.31
MxA:				
Maxton--------------	Somewhat limited		Somewhat limited	
	Slow water movement	0.32	Too acid	0.91

Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
NcA, NcB:				
Noboco	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	0.99
	Slow water movement	1.00	Too acid	0.91
	Too acid	0.14	Depth to saturated zone	0.86
NoA:				
Norfolk	Very limited		Very limited	
	Depth to saturated zone	1.00	Too acid	1.00
	Slow water movement	1.00	Filtering capacity	0.99
	Too acid	0.21		
NoB:				
Norfolk	Very limited		Very limited	
	Depth to saturated zone	1.00	Too acid	1.00
	Slow water movement	1.00	Filtering capacity	0.99
	Too acid	0.21	Too steep for surface application	0.08
OcA:				
Ocilla	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Too acid	0.99
OsA:				
Osier, undrained	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
	Too acid	0.03	Depth to saturated zone	1.00
			Too acid	1.00
PaA:				
Pactolus	Very limited		Very limited	
	Depth to saturated zone	1.00	Too acid	1.00
	Too acid	0.21	Filtering capacity	0.99
			Depth to saturated zone	0.95
PcA:				
Pamlico, undrained	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Flooding	1.00

Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
Johnston, undrained-	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Flooding	1.00
PnA:				
Pantego, drained----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Too acid	1.00
	Too acid	0.21		
Pantego, undrained--	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Too acid	1.00
	Too acid	0.21		
PoA, PoB:				
Pelion--------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Depth to cemented pan	1.00	Depth to cemented pan	1.00
	Slow water movement	1.00	Filtering capacity	0.99
PoC:				
Pelion--------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Depth to cemented pan	1.00	Depth to cemented pan	1.00
	Slow water movement	1.00	Too steep for surface application	1.00
PoD:				
Pelion--------------	Very limited		Very limited	
	Slope	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to cemented pan	1.00
	Depth to cemented pan	1.00	Too steep for surface application	1.00
PuA:				
Plummer, undrained--	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Too acid	1.00
	Too acid	0.14	Filtering capacity	0.99

Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
Osier, undrained----	Very limited		Very limited	
	Flooding	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	0.03	Flooding	1.00
PxA:				
Paxville, ponded----	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Depth to saturated zone saturated zone	1.00
	Depth to saturated zone	1.00	Flooding	1.00
Paxville, drained---	Very limited		Very limited	
	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Flooding	1.00
	Slow water movement	1.00	Filtering capacity	0.99
RaA:				
Rains, drained------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Too acid	0.99
	Too acid	0.14		
Rains, undrained----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00	Too acid	0.99
	Too acid	0.14		
RuA:				
Rutlege, undrained--	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	0.14	Too acid	1.00
			Filtering capacity	0.99
Rutlege, drained----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	0.14	Too acid	1.00
			Filtering capacity	0.99
ThA, ThB:				
Thursa--------------	Very limited		Somewhat limited	
	Slow water movement	1.00	Low adsorption	0.58
			Too acid	0.31

Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
UcC:				
Uchee	Very limited		Very limited	
	Slow water movement	1.00	Too steep for surface application	1.00
	Slope	1.00	Filtering capacity	0.99
			Too acid	0.99
Ud:				
Udorthents, loamy	Very limited		Somewhat limited	
	Slow water movement	1.00	Too steep for surface application	0.92
	Slope	0.88	Too acid	0.91
			Low adsorption	0.76
VaB:				
Vaucluse	Very limited		Very limited	
	Depth to cemented pan	1.00	Depth to cemented pan	1.00
	Slow water movement	1.00	Filtering capacity	0.99
	Too acid	0.14	Too acid	0.91
VaC:				
Vaucluse	Very limited		Very limited	
	Slope	1.00	Depth to cemented pan	1.00
	Depth to cemented pan	1.00	Too steep for surface application	1.00
	Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
WaB:				
Wagram	Not limited		Very limited	
			Filtering capacity	0.99
			Too acid	0.91
WcB:				
Wakulla	Not limited		Very limited	
			Filtering capacity	0.99
			Too acid	0.91
			Too steep for surface application	0.08
Candor	Very limited		Very limited	
	Slow water movement	1.00	Too acid	1.00
	Too acid	0.14	Filtering capacity	0.99
			Too steep for surface application	0.08

Agricultural Disposal of Wastewater by Rapid Infiltration and Slow Rate Treatment—Continued

Map symbol and soil name	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
WkB:				
Wakulla, moderately wet	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	0.99
			Too acid	0.91
			Too steep for surface application	0.08
Candor, moderately wet	Very limited		Very limited	
	Depth to saturated zone	1.00	Too acid	1.00
	Slow water movement	1.00	Filtering capacity	0.99
	Too acid	0.14	Too steep for surface application	0.08
WuB:				
Wakulla	Somewhat limited		Very limited	
	Slope	0.12	Filtering capacity	0.99
			Too acid	0.91
			Too steep for surface application	0.32
Rimini	Somewhat limited		Very limited	
	Slope	0.12	Filtering capacity	1.00
	Too acid	0.03	Too acid	1.00
			Too steep for surface application	0.32

Forestland Productivity

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
AeB, AeC:				
Ailey	longleaf pine	63	63	longleaf pine, loblolly pine
	loblolly pine	88	127	
	blackjack oak	---	---	
AuB:				
Autryville	loblolly pine	77	100	loblolly pine, longleaf pine
	longleaf pine	60	57	
	sweetgum	---	---	
	red maple	---	---	
	white oak	---	---	
	southern red oak	---	---	
	post oak	---	---	
	hickory	---	---	
BaA:				
Bibb, undrained	sweetgum	90	106	sweetgum, yellow-poplar, eastern cottonwood
	loblolly pine	90	131	
	water oak	90	86	
	blackgum	---	---	
	yellow-poplar	---	---	
	Atlantic white cedar	---	---	
BlC:				
Blanton	bluejack oak	---	---	loblolly pine, longleaf pine, slash pine
	live oak	---	---	
	loblolly pine	85	114	
	longleaf pine	70	86	
	slash pine	90	157	
	southern red oak	---	---	
	turkey oak	---	---	
BrB:				
Bragg	longleaf pine	---	---	longleaf pine, loblolly pine
	loblolly pine	---	---	
CaC:				
Candor	longleaf pine	58	52	longleaf pine, loblolly pine
	loblolly pine	---	---	
	turkey oak	---	---	
	blackjack oak	---	---	
	post oak	---	---	
Wakulla	longleaf pine	66	79	longleaf pine, loblolly pine
	loblolly pine	73	108	
	shortleaf pine	69	108	
	blackjack oak	---	---	
	post oak	---	---	
CoA:				
Coxville, drained	loblolly pine	94	143	loblolly pine, sweetgum
	sweetgum	90	100	
Coxville, undrained	loblolly pine	91	129	sweetgum, loblolly pine
	yellow-poplar	86	86	
	sweetgum	84	86	
	longleaf pine	77	100	
	southern red oak	87	72	
	willow oak	88	86	
	water oak	75	72	

Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
DbA:				
Dunbar, drained	---	---	---	loblolly pine, sweetgum, yellow-poplar
Dunbar, undrained	loblolly pine	90	129	---
	sweetgum	90	100	
	yellow-poplar	---	---	
	longleaf pine	70	86	
	water oak	---	---	
	water tupelo	---	---	
DpA:				
Duplin	loblolly pine	90	131	loblolly pine, yellow-poplar, American sycamore, sweetgum
	sweetgum	---	---	
	blackgum	---	---	
	southern red oak	---	---	
	white oak	---	---	
	yellow-poplar	---	---	
GoA:				
Goldsboro	loblolly pine	90	127	loblolly pine
	longleaf pine	73	86	
	sweetgum	---	---	
	southern red oak	---	---	
	white oak	---	---	
	water oak	---	---	
	yellow-poplar	---	---	
	red maple	---	---	
GrB, GrC:				
Gritney	loblolly pine	84	118	loblolly pine
	white oak	---	---	
	southern red oak	---	---	
	sweetgum	---	---	
	yellow-poplar	---	---	
JmA:				
Johnston, undrained	sweetgum	94	114	sweetgum, green ash, baldcypress, loblolly pine
	yellow-poplar	94	100	
	loblolly pine	106	172	
	water oak	103	100	
	water tupelo	---	---	
	swamp tupelo	---	---	
	baldcypress	---	---	
Johnston, drained	sweetgum	94	114	---
	yellow-poplar	94	100	
	loblolly pine	106	172	
	water oak	103	100	
	water tupelo	---	---	
	swamp tupelo	---	---	
	baldcypress	---	---	

Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
JoA:				
Johns	loblolly pine	88	129	loblolly pine
	longleaf pine	61	57	
	sweetgum	---	---	
	American sycamore	---	---	
	water oak	---	---	
	willow oak	---	---	
KaA:				
Kalmia	loblolly pine	88	129	loblolly pine, yellow-poplar, cherrybark oak
	yellow-poplar	96	100	
	sweetgum	85	86	
	white oak	---	---	
	southern red oak	---	---	
KnB:				
Kenansville, moderately wet	loblolly pine	80	114	loblolly pine
	longleaf pine	65	72	
LuA:				
Lumbee, drained	---	---	---	---
Lumbee, undrained	loblolly pine	94	143	loblolly pine, sweetgum
	pond pine	---	---	
	sweetgum	---	---	
	red maple	---	---	
	white oak	---	---	
	water oak	---	---	
	willow oak	---	---	
	water tupelo	---	---	
LyA:				
Lynchburg	loblolly pine	86	123	loblolly pine, sweetgum, American sycamore
	longleaf pine	74	88	
	yellow-poplar	92	93	
	sweetgum	90	106	
	southern red oak	---	---	
	white oak	---	---	
	blackgum	---	---	
MaA:				
Mantachie	cherrybark oak	100	157	cherrybark oak, eastern cottonwood, green ash, loblolly pine, sweetgum, tuliptree
	eastern cottonwood	90	100	
	green ash	80	43	
	sweetgum	95	129	
	tuliptree	95	100	
McA:				
McColl, ponded	sweetgum	92	114	baldcypress, water tupelo
	water tupelo	---	---	
	baldcypress	---	---	
McColl, drained	loblolly pine	87	125	loblolly pine, pond pine, American sycamore
	sweetgum	92	114	

Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
MxA:				
Maxton	loblolly pine	90	129	cherrybark oak, loblolly pine, yellow-poplar
	southern red oak	---	---	
	sweetgum	---	---	
	white oak	---	---	
	yellow-poplar	---	---	
NcA:				
Noboco	loblolly pine	90	129	American sycamore, loblolly pine, sweetgum
	longleaf pine	80	100	
	sweetgum	---	---	
	southern red oak	---	---	
NcB:				
Noboco	loblolly pine	90	131	loblolly pine
	southern red oak	---	---	
	sweetgum	---	---	
NoA, NoB:				
Norfolk	loblolly pine	84	118	loblolly pine
	longleaf pine	77	94	
	yellow-poplar	---	---	
	hickory	---	---	
	blackgum	---	---	
	white oak	---	---	
	southern red oak	---	---	
OcA:				
Ocilla	loblolly pine	85	114	loblolly pine
	longleaf pine	77	100	
OsA:				
Osier, undrained	loblolly pine	87	129	loblolly pine
	longleaf pine	69	72	
PaA:				
Pactolus	loblolly pine	86	129	loblolly pine
	longleaf pine	---	---	
	sweetgum	---	---	
	red maple	---	---	
	water oak	---	---	
	willow oak	---	---	
	black cherry	---	---	
PcA:				
Pamlico, undrained	pond pine	55	29	baldcypress, water tupelo
	baldcypress	---	---	
	water tupelo	---	---	
Johnston, undrained	sweetgum	94	114	sweetgum, green ash, baldcypress, loblolly pine
	yellow-poplar	94	100	
	loblolly pine	106	172	
	water oak	103	100	
	water tupelo	---	---	
	swamp tupelo	---	---	
	baldcypress	---	---	

Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
PnA:				
Pantego, drained--------	---	---	---	---
Pantego, undrained------	loblolly pine-------	91	129	loblolly pine, sweetgum
	yellow-poplar-------	110	129	
	sweetgum-----------	91	114	
	pond pine-----------	---	---	
	water oak-----------	---	---	
	willow oak----------	---	---	
	blackgum-----------	---	---	
	red maple-----------	---	---	
	baldcypress---------	---	---	
	water tupelo--------	---	---	
PoA, PoB, PoC, PoD:				
Pelion------------------	loblolly pine-------	80	114	loblolly pine, longleaf pine
	longleaf pine-------	---	---	
PuA:				
Plummer, undrained------	loblolly pine-------	91	129	loblolly pine
	longleaf pine-------	70	86	
Osier, undrained--------	loblolly pine-------	87	129	loblolly pine
	longleaf pine-------	69	72	
PxA:				
Paxville, ponded--------	sweetgum-----------	90	106	water tupelo, sweetgum
	baldcypress---------	---	---	
	water oak-----------	90	86	
	water tupelo--------	---	---	
Paxville, drained-------	loblolly pine-------	96	143	loblolly pine, American sycamore, water tupelo
	pond pine-----------	77	57	
	water oak-----------	90	86	
	water tupelo--------	---	---	
	baldcypress---------	---	---	
RaA:				
Rains, drained----------	---	---	---	---
Rains, undrained--------	loblolly pine-------	94	143	loblolly pine, sweetgum
	sweetgum-----------	90	131	
RuA:				
Rutlege, undrained------	loblolly pine-------	90	129	loblolly pine
	sweetgum-----------	90	100	
	pin oak-------------	85	72	
	baldcypress---------	100	86	
Rutlege, drained--------	loblolly pine-------	90	129	loblolly pine
	sweetgum-----------	90	100	
	pin oak-------------	85	72	
ThA:				
Thursa------------------	loblolly pine-------	88	110	loblolly pine, longleaf pine
	longleaf pine-------	---	---	
ThB:				
Thursa------------------	loblolly pine-------	80	110	loblolly pine, longleaf pine
	longleaf pine-------	---	---	

Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
UcC:				
Uchee	loblolly pine	80	114	loblolly pine, longleaf pine
	longleaf pine	67	72	
	shortleaf pine	---	---	
Ud:				
Udorthents, loamy	---	---	---	loblolly pine
VaB, VaC:				
Vaucluse	longleaf pine	55	45	longleaf pine, loblolly pine
	loblolly pine	71	95	
	white oak	---	---	
	southern red oak	---	---	
WaB:				
Wagram	loblolly pine	81	114	loblolly pine, longleaf pine
	longleaf pine	72	83	
WcB:				
Wakulla	longleaf pine	66	79	longleaf pine, loblolly pine
	loblolly pine	73	108	
	shortleaf pine	69	108	
	blackjack oak	---	---	
	post oak	---	---	
Candor	longleaf pine	58	52	longleaf pine, loblolly pine
	loblolly pine	---	---	
	turkey oak	---	---	
	blackjack oak	---	---	
	post oak	---	---	
WkB:				
Wakulla, moderately wet	longleaf pine	70	79	longleaf pine
	loblolly pine	79	108	
	blackjack oak	---	---	
	post oak	---	---	
Candor, moderately wet	blackjack oak	---	---	loblolly pine, longleaf pine
	loblolly pine	---	---	
	longleaf pine	58	57	
	post oak	---	---	
	turkey oak	---	---	
WuB:				
Wakulla	longleaf pine	70	79	longleaf pine
	loblolly pine	79	108	
	blackjack oak	---	---	
	post oak	---	---	
Rimini	loblolly pine	65	86	longleaf pine, sand pine
	longleaf pine	55	43	

Haul Roads, Log Landings, and Soil Rutting on Forestland

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AeB:						
Ailey---------------	Moderate		Well suited		Moderate	
	Sandiness	0.50			Low strength	0.50
AeC:						
Ailey---------------	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Slope	0.50	Low strength	0.50
AuB:						
Autryville----------	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Sandiness	0.50	Low strength	0.50
BaA:						
Bibb, undrained-----	Severe		Poorly suited		Severe	
	Flooding	1.00	Flooding	1.00	Low strength	1.00
	Low strength	0.50	Low strength	0.50		
			Wetness	0.50		
BlC:						
Blanton-------------	Moderate		Poorly suited		Moderate	
	Sandiness	0.50	Slope	1.00	Low strength	0.50
			Sandiness	0.50		
BrB:						
Bragg---------------	Slight		Well suited		Moderate	
					Low strength	0.50
CaC:						
Candor--------------	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Slope	0.50	Low strength	0.50
			Sandiness	0.50		
Wakulla-------------	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Slope	0.50	Low strength	0.50
			Sandiness	0.50		
CoA:						
Coxville, drained---	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Wetness	0.50		
Coxville, undrained-	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Wetness	0.50		
DbA:						
Dunbar, drained-----	Slight		Well suited		Moderate	
					Low strength	0.50
Dunbar, undrained---	Slight		Well suited		Moderate	
					Low strength	0.50

Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
DpA:						
Duplin	Slight		Well suited		Moderate	
					Low strength	0.50
GoA:						
Goldsboro	Slight		Well suited		Moderate	
					Low strength	0.50
GrB:						
Gritney	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
GrC:						
Gritney	Moderate		Moderately suited		Severe	
	Low strength	0.50	Slope	0.50	Low strength	1.00
			Low strength	0.50		
JmA:						
Johnston, undrained	Severe		Poorly suited		Severe	
	Flooding	1.00	Ponding	1.00	Low strength	1.00
	Low strength	1.00	Flooding	1.00		
	Wetness	1.00	Low strength	1.00		
Johnston, drained	Severe		Poorly suited		Severe	
	Flooding	1.00	Ponding	1.00	Low strength	1.00
	Low strength	1.00	Flooding	1.00		
	Wetness	1.00	Low strength	1.00		
JoA:						
Johns	Slight		Well suited		Moderate	
					Low strength	0.50
KaA:						
Kalmia	Slight		Well suited		Moderate	
					Low strength	0.50
KnB:						
Kenansville, moderately wet	Slight		Well suited		Moderate	
					Low strength	0.50
LuA:						
Lumbee, drained	Slight		Moderately suited		Moderate	
			Wetness	0.50	Low strength	0.50
Lumbee, undrained	Slight		Moderately suited		Moderate	
			Ponding	0.50	Low strength	0.50
			Wetness	0.50		
LyA:						
Lynchburg	Slight		Moderately suited		Moderate	
			Wetness	0.50	Low strength	0.50
MaA:						
Mantachie	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Wetness	0.50		

Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
McA:						
McColl, ponded	Moderate		Poorly suited		Severe	
	Low strength	0.50	Ponding	1.00	Low strength	1.00
			Low strength	0.50		
			Wetness	0.50		
McColl, drained	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Wetness	0.50		
MxA:						
Maxton	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Sandiness	0.50	Low strength	0.50
NcA, NcB:						
Noboco	Slight		Well suited		Moderate	
					Low strength	0.50
NoA, NoB:						
Norfolk	Slight		Well suited		Moderate	
					Low strength	0.50
OcA:						
Ocilla	Slight		Moderately suited		Moderate	
			Wetness	0.50	Low strength	0.50
OsA:						
Osier, undrained	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Sandiness	0.50	Low strength	0.50
			Wetness	0.50		
PaA:						
Pactolus	Slight		Well suited		Moderate	
					Low strength	0.50
PcA:						
Pamlico, undrained	Severe		Poorly suited		Moderate	
	Flooding	1.00	Ponding	1.00	Wetness	0.50
	Wetness	1.00	Flooding	1.00	Low strength	0.50
	Sandiness	0.50	Wetness	1.00		
Johnston, undrained	Severe		Poorly suited		Severe	
	Flooding	1.00	Ponding	1.00	Low strength	1.00
	Low strength	1.00	Flooding	1.00		
	Wetness	1.00	Low strength	1.00		
PnA:						
Pantego, drained	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
Pantego, undrained	Moderate		Moderately suited		Severe	
	Low strength	0.50	Low strength	0.50	Low strength	1.00
			Wetness	0.50		
PoA, PoB:						
Pelion	Slight		Well suited		Moderate	
					Low strength	0.50

Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
PoC:						
Pelion--------------	Slight		Moderately suited		Moderate	
			Slope	0.50	Low strength	0.50
PoD:						
Pelion--------------	Slight		Poorly suited		Moderate	
			Slope	1.00	Low strength	0.50
PuA:						
Plummer, undrained--	Severe		Moderately suited		Moderate	
	Wetness	1.00	Wetness	0.50	Low strength	0.50
Osier, undrained----	Severe		Poorly suited		Moderate	
	Flooding	1.00	Flooding	1.00	Low strength	0.50
	Sandiness	0.50	Sandiness	0.50		
			Wetness	0.50		
PxA:						
Paxville, ponded----	Severe		Poorly suited		Moderate	
	Flooding	1.00	Ponding	1.00	Wetness	0.50
	Wetness	1.00	Flooding	1.00	Low strength	0.50
	Sandiness	0.50	Wetness	1.00		
Paxville, drained---	Severe		Poorly suited		Moderate	
	Flooding	1.00	Flooding	1.00	Low strength	0.50
	Sandiness	0.50	Wetness	1.00		
			Sandiness	0.50		
RaA:						
Rains, drained------	Slight		Moderately suited		Moderate	
			Wetness	0.50	Low strength	0.50
Rains, undrained----	Slight		Moderately suited		Moderate	
			Wetness	0.50	Low strength	0.50
RuA:						
Rutlege, undrained--	Slight		Moderately suited		Moderate	
			Wetness	0.50	Low strength	0.50
Rutlege, drained----	Slight		Moderately suited		Moderate	
			Wetness	0.50	Low strength	0.50
ThA, ThB:						
Thursa--------------	Moderate		Well suited		Moderate	
	Stickiness/slope	0.50			Low strength	0.50
UcC:						
Uchee---------------	Slight		Moderately suited		Moderate	
			Slope	0.50	Low strength	0.50
Ud:						
Udorthents, loamy---	Slight		Moderately suited		Moderate	
			Slope	0.50	Low strength	0.50
VaB:						
Vaucluse------------	Slight		Well suited		Moderate	
					Low strength	0.50

Haul Roads, Log Landings, and Soil Rutting on Forestland—Continued

Map symbol and soil name	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
VaC:						
Vaucluse------------	Slight		Moderately suited		Moderate	
			Slope	0.50	Low strength	0.50
WaB:						
Wagram--------------	Slight		Well suited		Moderate	
					Low strength	0.50
WcB:						
Wakulla-------------	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Sandiness	0.50	Low strength	0.50
Candor--------------	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Sandiness	0.50	Low strength	0.50
WkB:						
Wakulla, moderately wet----------------	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Sandiness	0.50	Low strength	0.50
Candor, moderately wet----------------	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Sandiness	0.50	Low strength	0.50
WuB:						
Wakulla-------------	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Sandiness	0.50	Low strength	0.50
Rimini--------------	Moderate		Moderately suited		Moderate	
	Sandiness	0.50	Sandiness	0.50	Low strength	0.50

Hazard of Erosion and Suitability for Roads on Forestland

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
AeB:						
Ailey	Slight		Moderate		Well suited	
			Slope/erodibility	0.50		
AeC:						
Ailey	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Slope	0.50
AuB:						
Autryville	Slight		Slight		Moderately suited	
					Sandiness	0.50
BaA:						
Bibb, undrained	Slight		Slight		Poorly suited	
					Flooding	1.00
					Low strength	0.50
					Wetness	0.50
BlC:						
Blanton	Slight		Moderate		Poorly suited	
			Slope/erodibility	0.50	Slope	1.00
					Sandiness	0.50
BrB:						
Bragg	Slight		Moderate		Well suited	
			Slope/erodibility	0.50		
CaC:						
Candor	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Slope	0.50
					Sandiness	0.50
Wakulla	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Slope	0.50
					Sandiness	0.50
CoA:						
Coxville, drained	Slight		Slight		Moderately suited	
					Low strength	0.50
					Wetness	0.50
Coxville, undrained	Slight		Slight		Moderately suited	
					Low strength	0.50
					Wetness	0.50
DbA:						
Dunbar, drained	Slight		Slight		Well suited	
Dunbar, undrained	Slight		Slight		Well suited	
DpA:						
Duplin	Slight		Slight		Well suited	

Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GoA:						
Goldsboro-----------	Slight		Slight		Well suited	
GrB:						
Gritney-------------	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Low strength	0.50
GrC:						
Gritney-------------	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Slope	0.50
					Low strength	0.50
JmA:						
Johnston, undrained-	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Low strength	1.00
Johnston, drained---	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Low strength	1.00
JoA:						
Johns---------------	Slight		Slight		Well suited	
KaA:						
Kalmia--------------	Slight		Slight		Well suited	
KnB:						
Kenansville, moderately wet-----	Slight		Slight		Well suited	
LuA:						
Lumbee, drained-----	Slight		Slight		Moderately suited	
					Wetness	0.50
Lumbee, undrained---	Slight		Slight		Moderately suited	
					Ponding	0.50
					Wetness	0.50
LyA:						
Lynchburg-----------	Slight		Slight		Moderately suited	
					Wetness	0.50
MaA:						
Mantachie-----------	Slight		Slight		Moderately suited	
					Low strength	0.50
					Wetness	0.50
McA:						
McColl, ponded------	Slight		Slight		Poorly suited	
					Ponding	1.00
					Low strength	0.50
					Wetness	0.50
McColl, drained-----	Slight		Slight		Moderately suited	
					Low strength	0.50
					Wetness	0.50

Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
MxA:						
Maxton	Slight		Slight		Moderately suited	
					Sandiness	0.50
NcA, NcB:						
Noboco	Slight		Slight		Well suited	
NoA:						
Norfolk	Slight		Slight		Well suited	
NoB:						
Norfolk	Slight		Moderate		Well suited	
			Slope/erodibility	0.50		
OcA:						
Ocilla	Slight		Slight		Moderately suited	
					Wetness	0.50
OsA:						
Osier, undrained	Slight		Slight		Moderately suited	
					Sandiness	0.50
					Wetness	0.50
PaA:						
Pactolus	Slight		Slight		Well suited	
PcA:						
Pamlico, undrained	Very Severe		Very Severe		Poorly suited	
	Organic matter content high	1.00	Organic matter content high	1.00	Ponding	1.00
					Flooding	1.00
					Wetness	1.00
Johnston, undrained	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Low strength	1.00
PnA:						
Pantego, drained	Slight		Slight		Moderately suited	
					Low strength	0.50
Pantego, undrained	Slight		Slight		Moderately suited	
					Low strength	0.50
					Wetness	0.50
PoA:						
Pelion	Slight		Slight		Well suited	
PoB:						
Pelion	Slight		Moderate		Well suited	
			Slope/erodibility	0.50		
PoC:						
Pelion	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Slope	0.50
PoD:						
Pelion	Slight		Severe		Poorly suited	
			Slope/erodibility	0.95	Slope	1.00

Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
PuA:						
Plummer, undrained--	Slight		Slight		Moderately suited	
					Wetness	0.50
Osier, undrained----	Slight		Slight		Poorly suited	
					Flooding	1.00
					Sandiness	0.50
					Wetness	0.50
PxA:						
Paxville, ponded----	Slight		Slight		Poorly suited	
					Ponding	1.00
					Flooding	1.00
					Wetness	1.00
Paxville, drained---	Slight		Slight		Poorly suited	
					Flooding	1.00
					Wetness	1.00
					Sandiness	0.50
RaA:						
Rains, drained------	Slight		Slight		Moderately suited	
					Wetness	0.50
Rains, undrained----	Slight		Slight		Moderately suited	
					Wetness	0.50
RuA:						
Rutlege, undrained--	Slight		Slight		Moderately suited	
					Wetness	0.50
Rutlege, drained----	Slight		Slight		Moderately suited	
					Wetness	0.50
ThA, ThB:						
Thursa--------------	Slight		Slight		Well suited	
UcC:						
Uchee---------------	Slight		Severe		Moderately suited	
			Slope/erodibility	0.95	Slope	0.50
Ud:						
Udorthents, loamy---	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Slope	0.50
VaB:						
Vaucluse------------	Slight		Moderate		Well suited	
			Slope/erodibility	0.50		
VaC:						
Vaucluse------------	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Slope	0.50
WaB:						
Wagram--------------	Slight		Moderate		Well suited	
			Slope/erodibility	0.50		

Hazard of Erosion and Suitability for Roads on Forestland—Continued

Map symbol and soil name	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WcB:						
Wakulla	Slight		Slight		Moderately suited	
					Sandiness	0.50
Candor	Slight		Slight		Moderately suited	
					Sandiness	0.50
WkB:						
Wakulla, moderately wet	Slight		Slight		Moderately suited	
					Sandiness	0.50
Candor, moderately wet	Slight		Slight		Moderately suited	
					Sandiness	0.50
WuB:						
Wakulla	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Sandiness	0.50
Rimini	Slight		Moderate		Moderately suited	
			Slope/erodibility	0.50	Sandiness	0.50

Forestland Planting and Harvesting

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
AeB:						
Ailey	Moderately suited		Moderately suited		Well suited	
	Sandiness	0.50	Sandiness	0.50		
			Slope	0.50		
AeC:						
Ailey	Moderately suited		Moderately suited		Well suited	
	Sandiness	0.50	Slope	0.50		
			Sandiness	0.50		
AuB:						
Autryville	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50	Sandiness	0.50
BaA:						
Bibb, undrained	Well suited		Well suited		Moderately suited	
					Low strength	0.50
BlC:						
Blanton	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Slope	0.50	Sandiness	0.50
			Sandiness	0.50		
BrB:						
Bragg	Well suited		Well suited		Well suited	
CaC:						
Candor	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Slope	0.50	Sandiness	0.50
			Sandiness	0.50		
Wakulla	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Slope	0.50	Sandiness	0.50
			Sandiness	0.50		
CoA:						
Coxville, drained	Moderately suited		Moderately suited		Moderately suited	
	Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
Coxville, undrained	Moderately suited		Moderately suited		Moderately suited	
	Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
DbA:						
Dunbar, drained	Well suited		Well suited		Well suited	
Dunbar, undrained	Well suited		Well suited		Well suited	
DpA:						
Duplin	Moderately suited		Moderately suited		Well suited	
	Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50		

Forestland Planting and Harvesting—Continued

Map symbol and soil name	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
GoA:						
Goldsboro-----------	Well suited		Well suited		Well suited	
GrB:						
Gritney-------------	Poorly suited		Poorly suited		Moderately suited	
	Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
GrC:						
Gritney-------------	Poorly suited		Poorly suited		Moderately suited	
	Stickiness; high plasticity index	0.75	Stickiness; high plasticity index	0.75	Low strength	0.50
			Slope	0.50		
JmA:						
Johnston, undrained-	Well suited		Well suited		Poorly suited	
					Low strength	1.00
					Wetness	1.00
Johnston, drained---	Well suited		Well suited		Poorly suited	
					Low strength	1.00
					Wetness	1.00
JoA:						
Johns---------------	Well suited		Well suited		Well suited	
KaA:						
Kalmia--------------	Well suited		Well suited		Well suited	
KnB:						
Kenansville, moderately wet-----	Well suited		Well suited		Well suited	
LuA:						
Lumbee, drained-----	Well suited		Well suited		Well suited	
Lumbee, undrained---	Well suited		Well suited		Well suited	
LyA:						
Lynchburg-----------	Well suited		Well suited		Well suited	
MaA:						
Mantachie-----------	Well suited		Well suited		Moderately suited	
					Low strength	0.50
McA:						
McColl, ponded------	Well suited		Well suited		Moderately suited	
					Low strength	0.50
McColl, drained-----	Well suited		Well suited		Moderately suited	
					Low strength	0.50
MxA:						
Maxton--------------	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50	Sandiness	0.50
NcA, NcB:						
Noboco--------------	Well suited		Well suited		Well suited	

Forestland Planting and Harvesting—Continued

Map symbol and soil name	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
NoA, NoB:						
Norfolk	Well suited		Well suited		Well suited	
OcA:						
Ocilla	Well suited		Well suited		Well suited	
OsA:						
Osier, undrained	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50	Sandiness	0.50
PaA:						
Pactolus	Well suited		Well suited		Well suited	
PcA:						
Pamlico, undrained	Poorly suited		Poorly suited		Poorly suited	
	Wetness	0.75	Wetness	0.75	Wetness	1.00
	Sandiness	0.50	Sandiness	0.50	Sandiness	0.50
Johnston, undrained	Poorly suited		Poorly suited		Poorly suited	
	Wetness	0.75	Wetness	0.75	Low strength	1.00
					Wetness	1.00
PnA:						
Pantego, drained	Well suited		Well suited		Moderately suited	
					Low strength	0.50
Pantego, undrained	Well suited		Well suited		Moderately suited	
					Low strength	0.50
PoA, PoB:						
Pelion	Well suited		Well suited		Well suited	
PoC, PoD:						
Pelion	Well suited		Moderately suited		Well suited	
			Slope	0.50		
PuA:						
Plummer, undrained	Well suited		Well suited		Poorly suited	
					Wetness	1.00
Osier, undrained	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50	Sandiness	0.50
PxA:						
Paxville, ponded	Moderately suited		Moderately suited		Poorly suited	
	Wetness	0.50	Wetness	0.50	Wetness	1.00
	Sandiness	0.50	Sandiness	0.50	Sandiness	0.50
Paxville, drained	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50	Sandiness	0.50
RaA:						
Rains, drained	Well suited		Well suited		Well suited	
Rains, undrained	Well suited		Well suited		Well suited	

Forestland Planting and Harvesting—Continued

Map symbol and soil name	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
RuA:						
Rutlege, undrained--	Well suited		Well suited		Well suited	
Rutlege, drained----	Well suited		Well suited		Well suited	
ThA, ThB:						
Thursa--------------	Well suited		Well suited		Well suited	
UcC:						
Uchee---------------	Well suited		Moderately suited		Well suited	
			Slope	0.50		
Ud:						
Udorthents, loamy---	Well suited		Moderately suited		Well suited	
			Slope	0.50		
VaB, VaC:						
Vaucluse------------	Well suited		Moderately suited		Well suited	
			Slope	0.50		
WaB:						
Wagram--------------	Well suited		Well suited		Well suited	
WcB:						
Wakulla-------------	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50	Sandiness	0.50
Candor--------------	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50	Sandiness	0.50
WkB:						
Wakulla, moderately wet----------------	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50	Sandiness	0.50
Candor, moderately wet----------------	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50	Sandiness	0.50
WuB:						
Wakulla-------------	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50	Sandiness	0.50
			Slope	0.50		
Rimini--------------	Moderately suited		Moderately suited		Moderately suited	
	Sandiness	0.50	Sandiness	0.50	Sandiness	0.50
			Slope	0.50		

Forestland Site Preparation

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
AeB, AeC:				
Ailey	Well suited		Well suited	
AuB:				
Autryville	Well suited		Well suited	
BaA:				
Bibb, undrained	Well suited		Well suited	
BlC:				
Blanton	Well suited		Well suited	
BrB:				
Bragg	Well suited		Well suited	
CaC:				
Candor	Well suited		Well suited	
Wakulla	Well suited		Well suited	
CoA:				
Coxville, drained	Well suited		Well suited	
Coxville, undrained	Well suited		Well suited	
DbA:				
Dunbar, drained	Well suited		Well suited	
Dunbar, undrained	Well suited		Well suited	
DpA:				
Duplin	Well suited		Well suited	
GoA:				
Goldsboro	Well suited		Well suited	
GrB, GrC:				
Gritney	Poorly suited		Well suited	
	Stickiness; high plasticity index	0.50		
JmA:				
Johnston, undrained	Well suited		Unsuited	
			Wetness	1.00
Johnston, drained	Well suited		Unsuited	
			Wetness	1.00
JoA:				
Johns	Well suited		Well suited	

Forestland Site Preparation—Continued

Map symbol and soil name	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
KaA:				
Kalmia	Well suited		Well suited	
KnB:				
Kenansville, moderately wet	Well suited		Well suited	
LuA:				
Lumbee, drained	Well suited		Well suited	
Lumbee, undrained	Well suited		Well suited	
LyA:				
Lynchburg	Well suited		Well suited	
MaA:				
Mantachie	Well suited		Well suited	
McA:				
McColl, ponded	Well suited		Well suited	
McColl, drained	Well suited		Well suited	
MxA:				
Maxton	Well suited		Well suited	
NcA, NcB:				
Noboco	Well suited		Well suited	
NoA, NoB:				
Norfolk	Well suited		Well suited	
OcA:				
Ocilla	Well suited		Well suited	
OsA:				
Osier, undrained	Well suited		Well suited	
PaA:				
Pactolus	Well suited		Well suited	
PcA:				
Pamlico, undrained	Unsuited		Unsuited	
	Wetness	0.75	Wetness	1.00
Johnston, undrained	Unsuited		Unsuited	
	Wetness	0.75	Wetness	1.00
PnA:				
Pantego, drained	Well suited		Well suited	
Pantego, undrained	Well suited		Well suited	
PoA, PoB, PoC, PoD:				
Pelion	Well suited		Well suited	
PuA:				
Plummer, undrained	Well suited		Unsuited	
			Wetness	1.00

Forestland Site Preparation—Continued

Map symbol and soil name	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
	Rating class and limiting features	Value	Rating class and limiting features	Value
Osier, undrained----	Well suited		Well suited	
PxA:				
Paxville, ponded----	Poorly suited Wetness	 0.50	Unsuited Wetness	 1.00
Paxville, drained---	Well suited		Well suited	
RaA:				
Rains, drained------	Well suited		Well suited	
Rains, undrained----	Well suited		Well suited	
RuA:				
Rutlege, undrained--	Well suited		Well suited	
Rutlege, drained----	Well suited		Well suited	
ThA, ThB:				
Thursa--------------	Well suited		Well suited	
UcC:				
Uchee---------------	Well suited		Well suited	
Ud:				
Udorthents, loamy---	Well suited		Well suited	
VaB, VaC:				
Vaucluse------------	Well suited		Well suited	
WaB:				
Wagram--------------	Well suited		Well suited	
WcB:				
Wakulla-------------	Well suited		Well suited	
Candor--------------	Well suited		Well suited	
WkB:				
Wakulla, moderately wet----------------	Well suited		Well suited	
Candor, moderately wet----------------	Well suited		Well suited	
WuB:				
Wakulla-------------	Well suited		Well suited	
Rimini--------------	Well suited		Well suited	

Damage by Fire and Seedling Mortality on Forestland

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
AeB, AeC:				
Ailey---------------	High		Moderate	
	Texture/rock fragments	1.00	Available water	0.50
AuB:				
Autryville----------	High		Low	
	Texture/rock fragments	1.00		
BaA:				
Bibb, undrained-----	Moderate		High	
	Texture/rock fragments	0.50	Wetness	1.00
BlC:				
Blanton-------------	High		Low	
	Texture/rock fragments	1.00		
BrB:				
Bragg---------------	High		Low	
	Texture/rock fragments	1.00		
CaC:				
Candor--------------	High		Moderate	
	Texture/rock fragments	1.00	Available water	0.50
Wakulla-------------	High		Moderate	
	Texture/rock fragments	1.00	Available water	0.50
CoA:				
Coxville, drained---	Moderate		High	
	Texture/rock fragments	0.50	Wetness	1.00
Coxville, undrained-	Moderate		High	
	Texture/rock fragments	0.50	Wetness	1.00
DbA:				
Dunbar, drained-----	Low		Low	
	Texture/rock fragments	0.10		
Dunbar, undrained---	Low		Low	
	Texture/rock fragments	0.10		

Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
DpA:				
Duplin	Moderate		Low	
	Texture/rock fragments	0.50		
GoA:				
Goldsboro	High		Low	
	Texture/rock fragments	1.00		
GrB, GrC:				
Gritney	Moderate		Low	
	Texture/rock fragments	0.50		
JmA:				
Johnston, undrained	Low		High	
	Texture/rock fragments	0.10	Wetness	1.00
Johnston, drained	Low		High	
	Texture/rock fragments	0.10	Wetness	1.00
JoA:				
Johns	Moderate		Low	
	Texture/rock fragments	0.50		
KaA:				
Kalmia	High		Low	
	Texture/rock fragments	1.00		
KnB:				
Kenansville, moderately wet	High		Low	
	Texture/rock fragments	1.00		
LuA:				
Lumbee, drained	Moderate		High	
	Texture/rock fragments	0.50	Wetness	1.00
Lumbee, undrained	Moderate		High	
	Texture/rock fragments	0.50	Wetness	1.00
LyA:				
Lynchburg	Low		High	
	Texture/rock fragments	0.10	Wetness	1.00
MaA:				
Mantachie	Low		High	
	Texture/rock fragments	0.10	Wetness	1.00

Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
McA:				
McColl, ponded	Low		High	
	Texture/rock fragments	0.10	Wetness	1.00
McColl, drained	Low		High	
	Texture/rock fragments	0.10	Wetness	1.00
MxA:				
Maxton	High		Low	
	Texture/rock fragments	1.00		
NcA, NcB:				
Noboco	High		Low	
	Texture/rock fragments	1.00		
NoA, NoB:				
Norfolk	High		Low	
	Texture/rock fragments	1.00		
OcA:				
Ocilla	High		Low	
	Texture/rock fragments	1.00		
OsA:				
Osier, undrained	Moderate		High	
	Texture/rock fragments	0.50	Wetness	1.00
PaA:				
Pactolus	High		Low	
	Texture/rock fragments	1.00		
PcA:				
Pamlico, undrained	Low		High	
			Wetness	1.00
Johnston, undrained	Low		High	
	Texture/rock fragments	0.10	Wetness	1.00
PnA:				
Pantego, drained	Low		High	
	Texture/rock fragments	0.10	Wetness	1.00
Pantego, undrained	Low		High	
	Texture/rock fragments	0.10	Wetness	1.00

Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
PoA, PoB, PoC, PoD:				
Pelion	High		Low	
	Texture/rock fragments	1.00		
PuA:				
Plummer, undrained	Moderate		High	
	Texture/rock fragments	0.50	Wetness	1.00
Osier, undrained	Moderate		High	
	Texture/rock fragments	0.50	Wetness	1.00
PxA:				
Paxville, ponded	Low		High	
	Texture/rock fragments	0.10	Wetness	1.00
Paxville, drained	Low		High	
	Texture/rock fragments	0.10	Wetness	1.00
RaA:				
Rains, drained	Low		High	
	Texture/rock fragments	0.10	Wetness	1.00
Rains, undrained	Low		High	
	Texture/rock fragments	0.10	Wetness	1.00
RuA:				
Rutlege, undrained	Moderate		High	
	Texture/rock fragments	0.50	Wetness	1.00
Rutlege, drained	Moderate		High	
	Texture/rock fragments	0.50	Wetness	1.00
ThA, ThB:				
Thursa	High		Low	
	Texture/rock fragments	1.00		
UcC:				
Uchee	High		Low	
	Texture/rock fragments	1.00		
Ud:				
Udorthents, loamy	Moderate		Low	
	Texture/rock fragments	0.50		

Damage by Fire and Seedling Mortality on Forestland—Continued

Map symbol and soil name	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
VaB, VaC:				
Vaucluse	High		Low	
	Texture/rock fragments	1.00		
WaB:				
Wagram	High		Low	
	Texture/rock fragments	1.00		
WcB:				
Wakulla	High		Moderate	
	Texture/rock fragments	1.00	Available water	0.50
Candor	High		Moderate	
	Texture/rock fragments	1.00	Available water	0.50
WkB:				
Wakulla, moderately wet	High		Moderate	
	Texture/rock fragments	1.00	Available water	0.50
Candor, moderately wet	High		Moderate	
	Texture/rock fragments	1.00	Available water	0.50
WuB:				
Wakulla	High		Moderate	
	Texture/rock fragments	1.00	Available water	0.50
Rimini	High		Moderate	
	Texture/surface depth/rock fragments	1.00	Available water	0.50

Camp Areas, Picnic Areas, and Playgrounds

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
AeB:						
Ailey	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.79	Too sandy	0.79	Slope	0.88
	Depth to cemented pan	0.06	Depth to cemented pan	0.06	Too sandy	0.79
					Depth to cemented pan	0.06
AeC:						
Ailey	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.79	Too sandy	0.79	Slope	1.00
	Slope	0.63	Slope	0.63	Too sandy	0.79
	Depth to cemented pan	0.06	Depth to cemented pan	0.06	Depth to cemented pan	0.06
AuB:						
Autryville	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.96	Too sandy	0.96	Too sandy	0.96
BaA:						
Bibb, undrained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.40	Flooding	1.00
BlC:						
Blanton	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Slope	1.00
	Slope	0.84	Slope	0.84	Too sandy	1.00
BrB:						
Bragg	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.79	Too sandy	0.79	Too sandy	0.79
	Slow water movement	0.15	Slow water movement	0.15	Slow water movement	0.15
					Slope	0.12
CaC:						
Candor	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Slope	1.00
	Slope	0.63	Slope	0.63	Too sandy	1.00
Wakulla	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Slope	1.00
	Slope	0.63	Slope	0.63	Too sandy	1.00
CoA:						
Coxville, drained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.15	Slow water movement	0.15	Slow water movement	0.15
					Gravel content	0.06

Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
Coxville, undrained-	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.15	Slow water movement	0.15	Slow water movement	0.15
					Gravel content	0.06
DbA:						
Dunbar, drained-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
	Slow water movement	0.15	Slow water movement	0.15	Slow water movement	0.15
Dunbar, undrained---	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
	Slow water movement	0.15	Slow water movement	0.15	Slow water movement	0.15
DpA:						
Duplin--------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Slow water movement	0.15	Slow water movement	0.15	Slow water movement	0.15
GoA:						
Goldsboro-----------	Not limited		Not limited		Not limited	
GrB:						
Gritney-------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Slow water movement	0.94	Slow water movement	0.94	Slow water movement	0.94
	Depth to saturated zone	0.07	Depth to saturated zone	0.03	Slope	0.50
					Depth to saturated zone	0.07
GrC:						
Gritney-------------	Somewhat limited		Somewhat limited		Very limited	
	Slow water movement	0.94	Slow water movement	0.94	Slope	1.00
	Depth to saturated zone	0.07	Depth to saturated zone	0.03	Slow water movement	0.94
					Depth to saturated zone	0.07
JmA:						
Johnston, undrained-	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
Johnston, drained---	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00

Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
JoA:						
Johns	Very limited		Somewhat limited		Somewhat limited	
	Flooding	1.00	Depth to saturated zone	0.03	Depth to saturated zone	0.07
	Depth to saturated zone	0.07				
KaA:						
Kalmia	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.94	Too sandy	0.94	Too sandy	0.94
KnB:						
Kenansville, moderately wet	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.84	Too sandy	0.84	Too sandy	0.84
LuA:						
Lumbee, drained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00				
Lumbee, undrained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00				
LyA:						
Lynchburg	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
MaA:						
Mantachie	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00				
McA:						
McColl, ponded	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Slow water movement	0.94	Slow water movement	0.94	Slow water movement	0.94
McColl, drained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.94	Slow water movement	0.94	Slow water movement	0.94
	Depth to cemented pan	0.68	Depth to cemented pan	0.68		
MxA:						
Maxton	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.50	Too sandy	0.50	Too sandy	0.50

Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
NcA:						
Noboco	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.98	Too sandy	0.98	Too sandy	0.98
NcB:						
Noboco	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.98	Too sandy	0.98	Too sandy	0.98
					Slope	0.50
NoA:						
Norfolk	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.37	Too sandy	0.37	Too sandy	0.37
NoB:						
Norfolk	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.37	Too sandy	0.37	Slope	0.50
					Too sandy	0.37
OcA:						
Ocilla	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.94	Too sandy	0.94	Too sandy	0.94
	Depth to saturated zone	0.81	Depth to saturated zone	0.48	Depth to saturated zone	0.81
OsA:						
Osier, undrained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Too sandy	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Too sandy	1.00
	Too sandy	1.00				
PaA:						
Pactolus	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.81	Too sandy	0.81	Too sandy	0.81
	Depth to saturated zone	0.07	Depth to saturated zone	0.03	Depth to saturated zone	0.07
PcA:						
Pamlico, undrained	Not rated		Not rated		Not rated	
Johnston, undrained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
PnA:						
Pantego, drained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00				
Pantego, undrained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00				

Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
PoA:						
Pelion----------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to cemented pan	0.97	Depth to cemented pan	0.97	Depth to saturated zone	0.81
	Depth to saturated zone	0.81	Depth to saturated zone	0.48	Too sandy	0.30
	Too sandy	0.30	Too sandy	0.30		
PoB:						
Pelion----------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to cemented pan	0.97	Depth to cemented pan	0.97	Depth to cemented pan	0.97
	Depth to saturated zone	0.81	Depth to saturated zone	0.48	Depth to saturated zone	0.81
	Too sandy	0.30	Too sandy	0.30	Slope	0.50
PoC:						
Pelion----------------	Somewhat limited		Somewhat limited		Very limited	
	Depth to cemented pan	0.97	Depth to cemented pan	0.97	Slope	1.00
	Depth to saturated zone	0.81	Depth to saturated zone	0.48	Depth to cemented pan	0.97
	Too sandy	0.30	Too sandy	0.30	Depth to saturated zone	0.81
PoD:						
Pelion----------------	Somewhat limited		Somewhat limited		Very limited	
	Depth to cemented pan	0.97	Depth to cemented pan	0.97	Slope	1.00
	Slope	0.84	Slope	0.84	Depth to cemented pan	0.97
	Depth to saturated zone	0.81	Depth to saturated zone	0.48	Depth to saturated zone	0.81
PuA:						
Plummer, undrained--	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too sandy	0.89	Too sandy	0.89	Too sandy	0.89
Osier, undrained----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Too sandy	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Too sandy	1.00
	Too sandy	1.00	Flooding	0.40	Flooding	1.00
PxA:						
Paxville, ponded----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
Paxville, drained---	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	0.40	Flooding	1.00

Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
RaA:						
Rains, drained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Rains, undrained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
RuA:						
Rutlege, undrained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Too sandy	0.87	Too sandy	0.87
	Too sandy	0.87				
Rutlege, drained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Too sandy	0.87	Too sandy	0.87
	Too sandy	0.87				
ThA:						
Thursa	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.91	Too sandy	0.91	Too sandy	0.91
ThB:						
Thursa	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.91	Too sandy	0.91	Too sandy	0.91
					Slope	0.12
UcC:						
Uchee	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.84	Too sandy	0.84	Slope	1.00
	Slow water movement	0.15	Slow water movement	0.15	Too sandy	0.84
	Slope	0.04	Slope	0.04	Slow water movement	0.15
Ud:						
Udorthents, loamy	Not limited		Not limited		Very limited	
					Slope	1.00
VaB:						
Vaucluse	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.87	Too sandy	0.87	Slope	0.88
	Depth to cemented pan	0.54	Depth to cemented pan	0.54	Too sandy	0.87
					Depth to cemented pan	0.54
VaC:						
Vaucluse	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.87	Too sandy	0.87	Slope	1.00
	Slope	0.63	Slope	0.63	Too sandy	0.87
	Depth to cemented pan	0.54	Depth to cemented pan	0.54	Depth to cemented pan	0.54

Camp Areas, Picnic Areas, and Playgrounds—Continued

Map symbol and soil name	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
WaB:						
Wagram---------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.87	Too sandy	0.87	Too sandy	0.87
					Slope	0.12
WcB:						
Wakulla--------------	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Too sandy	1.00
					Slope	0.50
Candor---------------	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Too sandy	1.00
					Slope	0.50
WkB:						
Wakulla, moderately wet-----------------	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Too sandy	1.00
					Slope	0.50
Candor, moderately wet-----------------	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Too sandy	1.00
					Slope	0.50
WuB:						
Wakulla--------------	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Too sandy	1.00
					Slope	0.88
Rimini---------------	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Too sandy	1.00
					Slope	0.88

Paths, Trails, and Golf Fairways

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AeB:						
Ailey---------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.79	Too sandy	0.79	Droughty	0.96
					Depth to cemented pan	0.06
AeC:						
Ailey---------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.79	Too sandy	0.79	Droughty	0.96
					Slope	0.63
					Depth to cemented pan	0.06
AuB:						
Autryville----------	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.96	Too sandy	0.96	Too sandy	0.50
					Droughty	0.23
BaA:						
Bibb, undrained-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
BlC:						
Blanton-------------	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Droughty	0.99
					Slope	0.84
					Too sandy	0.50
BrB:						
Bragg---------------	Somewhat limited		Somewhat limited		Not limited	
	Too sandy	0.79	Too sandy	0.79		
CaC:						
Candor--------------	Very limited		Very limited		Somewhat limited	
	Too sandy	1.00	Too sandy	1.00	Droughty	0.99
					Slope	0.63
					Too sandy	0.50
Wakulla-------------	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Droughty	1.00
					Slope	0.63
					Too sandy	0.50
CoA:						
Coxville, drained---	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Coxville, undrained-	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
DbA:						
Dunbar, drained-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
Dunbar, undrained---	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
DpA:						
Duplin--------------	Not limited		Not limited		Not limited	
GoA:						
Goldsboro-----------	Not limited		Not limited		Not limited	
GrB, GrC:						
Gritney-------------	Not limited		Not limited		Somewhat limited	
					Depth to saturated zone	0.03
JmA:						
Johnston, undrained-	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
Johnston, drained---	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
JoA:						
Johns---------------	Not limited		Not limited		Somewhat limited	
					Depth to saturated zone	0.03
KaA:						
Kalmia--------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.94	Too sandy	0.94	Droughty	0.07
KnB:						
Kenansville, moderately wet-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.84	Too sandy	0.84	Droughty	0.21
LuA:						
Lumbee, drained-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
					Droughty	0.05
Lumbee, undrained---	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
					Droughty	0.05

Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
LyA:						
Lynchburg-----------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
MaA:						
Mantachie-----------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
McA:						
McColl, ponded------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
					Depth to cemented pan	0.68
McColl, drained-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
					Depth to cemented pan	0.68
					Droughty	0.32
MxA:						
Maxton--------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.50	Too sandy	0.50	Droughty	0.01
NcA, NcB:						
Noboco--------------	Somewhat limited		Somewhat limited		Not limited	
	Too sandy	0.98	Too sandy	0.98		
NoA, NoB:						
Norfolk-------------	Somewhat limited		Somewhat limited		Not limited	
	Too sandy	0.37	Too sandy	0.37		
OcA:						
Ocilla--------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.94	Too sandy	0.94	Depth to saturated zone	0.48
	Depth to saturated zone	0.11	Depth to saturated zone	0.11	Droughty	0.29
OsA:						
Osier, undrained----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too sandy	1.00	Too sandy	1.00	Droughty	0.69
PaA:						
Pactolus------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.81	Too sandy	0.81	Droughty	0.34
					Depth to saturated zone	0.03
PcA:						
Pamlico, undrained--	Not rated		Not rated		Not rated	

Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Johnston, undrained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
PnA:						
Pantego, drained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Pantego, undrained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
PoA, PoB, PoC:						
Pelion	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.30	Too sandy	0.30	Droughty	0.97
	Depth to saturated zone	0.11	Depth to saturated zone	0.11	Depth to cemented pan	0.97
					Depth to saturated zone	0.48
PoD:						
Pelion	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.30	Too sandy	0.30	Droughty	0.97
	Depth to saturated zone	0.11	Depth to saturated zone	0.11	Depth to cemented pan	0.97
					Slope	0.84
PuA:						
Plummer, undrained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too sandy	0.89	Too sandy	0.89	Droughty	0.69
Osier, undrained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Too sandy	1.00	Too sandy	1.00	Depth to saturated zone	1.00
	Flooding	0.40	Flooding	0.40	Droughty	0.69
PxA:						
Paxville, ponded	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
	Ponding	1.00	Ponding	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
Paxville, drained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
RaA:						
Rains, drained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
Rains, undrained----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
RuA:						
Rutlege, undrained--	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too sandy	0.87	Too sandy	0.87	Droughty	0.16
Rutlege, drained----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too sandy	0.87	Too sandy	0.87	Droughty	0.16
ThA, ThB:						
Thursa--------------	Somewhat limited		Somewhat limited		Not limited	
	Too sandy	0.91	Too sandy	0.91		
UcC:						
Uchee---------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.84	Too sandy	0.84	Slope	0.04
					Droughty	0.01
Ud:						
Udorthents, loamy---	Not limited		Not limited		Not limited	
VaB:						
Vaucluse------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.87	Too sandy	0.87	Droughty	0.70
					Depth to cemented pan	0.54
VaC:						
Vaucluse------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.87	Too sandy	0.87	Droughty	0.70
					Slope	0.63
					Depth to cemented pan	0.54
WaB:						
Wagram--------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.87	Too sandy	0.87	Droughty	0.01
WcB:						
Wakulla-------------	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Droughty	1.00
					Too sandy	0.50
Candor--------------	Very limited		Very limited		Somewhat limited	
	Too sandy	1.00	Too sandy	1.00	Droughty	0.99
					Too sandy	0.50
WkB:						
Wakulla, moderately wet----------------	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Droughty	1.00
					Too sandy	0.50

Paths, Trails, and Golf Fairways—Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Candor, moderately wet	Very limited		Very limited		Somewhat limited	
	Too sandy	1.00	Too sandy	1.00	Droughty	0.99
					Too sandy	0.50
WuB:						
Wakulla	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Droughty	1.00
					Too sandy	0.50
Rimini	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Droughty	1.00
					Too sandy	0.50

Dwellings and Small Commercial Buildings

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AeB:						
Ailey---------------	Not limited		Not limited		Somewhat limited	
					Slope	0.12
AeC:						
Ailey---------------	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.63	Slope	0.63	Slope	1.00
AuB:						
Autryville----------	Not limited		Somewhat limited		Not limited	
			Depth to saturated zone	0.15		
BaA:						
Bibb, undrained-----	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
BlC:						
Blanton-------------	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.84	Slope	0.84	Slope	1.00
			Depth to saturated zone	0.15		
BrB:						
Bragg---------------	Not limited		Not limited		Not limited	
CaC:						
Candor--------------	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.63	Slope	0.63	Slope	1.00
Wakulla-------------	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.63	Slope	0.63	Slope	1.00
CoA:						
Coxville, drained---	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Coxville, undrained-	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
DbA:						
Dunbar, drained-----	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Dunbar, undrained---	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
	Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
DpA:						
Duplin	Somewhat limited		Very limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99	Shrink-swell	0.50
			Shrink-swell	0.50		
GoA:						
Goldsboro	Not limited		Very limited		Not limited	
			Depth to saturated zone	0.99		
GrB:						
Gritney	Somewhat limited		Very limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
	Depth to saturated zone	0.07	Shrink-swell	0.50	Depth to saturated zone	0.07
GrC:						
Gritney	Somewhat limited		Very limited		Somewhat limited	
	Shrink-swell	0.50	Depth to saturated zone	1.00	Slope	0.88
	Depth to saturated zone	0.07	Shrink-swell	0.50	Shrink-swell	0.50
					Depth to saturated zone	0.07
JmA:						
Johnston, undrained	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Johnston, drained	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
JoA:						
Johns	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	0.07	Depth to saturated zone	1.00	Depth to saturated zone	0.07
KaA:						
Kalmia	Not limited		Not limited		Not limited	
KnB:						
Kenansville, moderately wet	Not limited		Somewhat limited		Not limited	
			Depth to saturated zone	0.15		
LuA:						
Lumbee, drained	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
Lumbee, undrained---	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
LyA:						
Lynchburg-----------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
MaA:						
Mantachie-----------	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
McA:						
McColl, ponded------	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Depth to thick cemented pan	0.68	Depth to thick cemented pan	1.00	Depth to thick cemented pan	0.68
McColl, drained-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Depth to thick cemented pan	0.68	Depth to thick cemented pan	1.00	Depth to thick cemented pan	0.68
MxA:						
Maxton--------------	Not limited		Not limited		Not limited	
NcA, NcB:						
Noboco--------------	Not limited		Very limited		Not limited	
			Depth to saturated zone	0.99		
NoA, NoB:						
Norfolk-------------	Not limited		Somewhat limited		Not limited	
			Depth to saturated zone	0.61		
OcA:						
Ocilla--------------	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.81	Depth to saturated zone	1.00	Depth to saturated zone	0.81
OsA:						
Osier, undrained----	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
PaA:						
Pactolus------------	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.07	Depth to saturated zone	1.00	Depth to saturated zone	0.07

Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
PcA:						
Pamlico, undrained--	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Johnston, undrained-	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
PnA:						
Pantego, drained----	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Pantego, undrained--	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
PoA, PoB:						
Pelion--------------	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.81	Depth to saturated zone	1.00	Depth to saturated zone	0.81
PoC:						
Pelion--------------	Somewhat limited		Very limited		Very limited	
	Depth to saturated zone	0.81	Depth to saturated zone	1.00	Slope	1.00
	Slope	0.01	Slope	0.01	Depth to saturated zone	0.81
PoD:						
Pelion--------------	Somewhat limited		Very limited		Very limited	
	Slope	0.84	Depth to saturated zone	1.00	Slope	1.00
	Depth to saturated zone	0.81	Slope	0.84	Depth to saturated zone	0.81
PuA:						
Plummer, undrained--	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Osier, undrained----	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
PxA:						
Paxville, ponded----	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
Paxville, drained	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
RaA:						
Rains, drained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Rains, undrained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
RuA:						
Rutlege, undrained	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Rutlege, drained	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
ThA, ThB:						
Thursa	Not limited		Not limited		Not limited	
UcC:						
Uchee	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Shrink-swell	0.50	Slope	1.00
			Depth to saturated zone	0.47		
			Slope	0.04		
Ud:						
Udorthents, loamy	Not limited		Not limited		Somewhat limited	
					Slope	0.88
VaB:						
Vaucluse	Not limited		Not limited		Somewhat limited	
					Slope	0.12
VaC:						
Vaucluse	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.63	Slope	0.63	Slope	1.00
WaB:						
Wagram	Not limited		Not limited		Not limited	
WcB:						
Wakulla	Not limited		Not limited		Not limited	
Candor	Not limited		Not limited		Not limited	

Dwellings and Small Commercial Buildings—Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WkB:						
Wakulla, moderately wet----------------	Not limited		Somewhat limited		Not limited	
			Depth to saturated zone	0.15		
Candor, moderately wet----------------	Not limited		Somewhat limited		Not limited	
			Depth to saturated zone	0.15		
WuB:						
Wakulla-------------	Not limited		Not limited		Somewhat limited	
					Slope	0.12
Rimini--------------	Not limited		Not limited		Somewhat limited	
					Slope	0.12

Roads and Streets, Shallow Excavations, and Lawns and Landscaping

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AeB:						
Ailey	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.96
			Dense layer	0.50	Depth to cemented pan	0.06
AeC:						
Ailey	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.63	Cutbanks cave	1.00	Droughty	0.96
			Slope	0.63	Slope	0.63
			Dense layer	0.50	Depth to cemented pan	0.06
AuB:						
Autryville	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Too sandy	0.50
			Depth to saturated zone	0.15	Droughty	0.23
BaA:						
Bibb, undrained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Cutbanks cave	1.00	Depth to saturated zone	1.00
			Flooding	0.80		
BlC:						
Blanton	Somewhat limited		Very limited		Very limited	
	Slope	0.84	Cutbanks cave	1.00	Droughty	0.99
			Slope	0.84	Slope	0.84
			Depth to saturated zone	0.15	Too sandy	0.50
BrB:						
Bragg	Not limited		Somewhat limited		Not limited	
			Cutbanks cave	0.10		
CaC:						
Candor	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.63	Cutbanks cave	1.00	Droughty	0.99
			Slope	0.63	Slope	0.63
					Too sandy	0.50
Wakulla	Somewhat limited		Very limited		Very limited	
	Slope	0.63	Cutbanks cave	1.00	Droughty	1.00
			Slope	0.63	Slope	0.63
					Too sandy	0.50
CoA:						
Coxville, drained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Low strength	0.10	Cutbanks cave	0.10		
			Too clayey	0.06		

Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
Coxville, undrained-	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Low strength	0.10	Cutbanks cave	0.10		
			Too clayey	0.06		
DbA:						
Dunbar, drained-----	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.75	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Shrink-swell	0.50	Too clayey	0.12		
	Low strength	0.10	Cutbanks cave	0.10		
Dunbar, undrained---	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.75	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Shrink-swell	0.50	Too clayey	0.12		
	Low strength	0.10	Cutbanks cave	0.10		
DpA:						
Duplin--------------	Somewhat limited		Very limited		Not limited	
	Shrink-swell	0.50	Depth to saturated zone	0.99		
	Low strength	0.10	Too clayey	0.28		
			Cutbanks cave	0.10		
GoA:						
Goldsboro-----------	Not limited		Very limited		Not limited	
			Depth to saturated zone	0.99		
			Cutbanks cave	0.10		
GrB, GrC:						
Gritney-------------	Very limited		Very limited		Somewhat limited	
	Low strength	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.03
	Shrink-swell	0.50				
	Depth to saturated zone	0.03	Too clayey	0.28		
			Cutbanks cave	0.10		
JmA:						
Johnston, undrained-	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Cutbanks cave	1.00	Depth to saturated zone	1.00
Johnston, drained---	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Cutbanks cave	1.00	Depth to saturated zone	1.00
JoA:						
Johns---------------	Somewhat limited		Very limited		Somewhat limited	
	Flooding	0.40	Depth to saturated zone	1.00	Depth to saturated zone	0.03
	Depth to saturated zone	0.03	Cutbanks cave	1.00		

Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
KaA:						
Kalmia	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.07
KnB:						
Kenansville, moderately wet	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.21
			Depth to saturated zone	0.15		
LuA:						
Lumbee, drained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	0.40	Cutbanks cave	1.00	Droughty	0.05
Lumbee, undrained	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	0.40	Cutbanks cave	1.00	Droughty	0.05
LyA:						
Lynchburg	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Cutbanks cave	0.10		
MaA:						
Mantachie	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	0.40	Cutbanks cave	0.10		
McA:						
McColl, ponded	Very limited		Very limited		Very limited	
	Ponding	1.00	Depth to thick cemented pan	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Depth to thick cemented pan	0.68	Depth to saturated zone	1.00	Depth to cemented pan	0.68
McColl, drained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to thick cemented pan	1.00	Depth to saturated zone	1.00
	Depth to thick cemented pan	0.68	Depth to saturated zone	1.00	Depth to cemented pan	0.68
			Dense layer	0.50	Droughty	0.32
MxA:						
Maxton	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.01
NcA, NcB:						
Noboco	Not limited		Very limited		Not limited	
			Depth to saturated zone	0.99		
			Cutbanks cave	0.10		

Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
NoA, NoB:						
Norfolk	Not limited		Somewhat limited		Not limited	
			Depth to saturated zone	0.61		
			Cutbanks cave	0.10		
OcA:						
Ocilla	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.48	Depth to saturated zone	1.00	Depth to saturated zone	0.48
			Cutbanks cave	1.00	Droughty	0.29
OsA:						
Osier, undrained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	0.40	Cutbanks cave	1.00	Droughty	0.69
PaA:						
Pactolus	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.03	Depth to saturated zone	1.00	Droughty	0.34
			Cutbanks cave	1.00	Depth to saturated zone	0.03
PcA:						
Pamlico, undrained	Very limited		Very limited		Not rated	
	Ponding	1.00	Ponding	1.00		
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
	Flooding	1.00	Cutbanks cave	1.00		
Johnston, undrained	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Flooding	1.00	Cutbanks cave	1.00	Depth to saturated zone	1.00
PnA:						
Pantego, drained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Low strength	0.78	Cutbanks cave	0.10		
	Flooding	0.40				
Pantego, undrained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Low strength	0.78	Cutbanks cave	0.10		
	Flooding	0.40				
PoA, PoB:						
Pelion	Somewhat limited		Very limited		Somewhat limited	
	Depth to saturated zone	0.48	Depth to saturated zone	1.00	Droughty	0.97
			Cutbanks cave	0.10	Depth to cemented pan	0.97
					Depth to saturated zone	0.48

Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
PoC:						
Pelion	Somewhat limited		Very limited		Somewhat limited	
	Depth to	0.48	Depth to	1.00	Droughty	0.97
	saturated zone		saturated zone		Depth to cemented	0.97
	Slope	0.01	Cutbanks cave	0.10	pan	
			Slope	0.01	Depth to	0.48
					saturated zone	
PoD:						
Pelion	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.84	Depth to	1.00	Droughty	0.97
	Depth to	0.48	saturated zone		Depth to cemented	0.97
	saturated zone		Slope	0.84	pan	7
			Cutbanks cave	0.10	Slope	0.84
PuA:						
Plummer, undrained	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
			Cutbanks cave	1.00	Droughty	0.69
Osier, undrained	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Flooding	1.00
	saturated zone		saturated zone		Depth to	1.00
	Flooding	1.00	Cutbanks cave	1.00	saturated zone	
			Flooding	0.80	Droughty	0.69
PxA:						
Paxville, ponded	Very limited		Very limited		Very limited	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to	1.00	Depth to	1.00	Flooding	1.00
	saturated zone		saturated zone		Depth to	1.00
	Flooding	1.00	Cutbanks cave	1.00	saturated zone	
Paxville, drained	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Flooding	1.00
	saturated zone		saturated zone		Depth to	1.00
	Flooding	1.00	Cutbanks cave	1.00	saturated zone	
			Flooding	0.80		
RaA:						
Rains, drained	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Low strength	0.22	Cutbanks cave	0.10		
Rains, undrained	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Low strength	0.22	Cutbanks cave	0.10		
RuA:						
Rutlege, undrained	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Flooding	0.40	Cutbanks cave	1.00	Droughty	0.16

Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
Rutlege, drained----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	0.40	Cutbanks cave	1.00	Droughty	0.16
ThA, ThB:						
Thursa--------------	Not limited		Somewhat limited		Not limited	
			Too clayey	0.49		
			Cutbanks cave	0.10		
UcC:						
Uchee---------------	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.04	Cutbanks cave	1.00	Slope	0.04
			Depth to saturated zone	0.47	Droughty	0.01
			Slope	0.04		
Ud:						
Udorthents, loamy---	Not limited		Somewhat limited		Not limited	
			Cutbanks cave	0.10		
VaB:						
Vaucluse------------	Not limited		Somewhat limited		Somewhat limited	
			Dense layer	0.50	Droughty	0.70
			Cutbanks cave	0.10	Depth to cemented pan	0.54
VaC:						
Vaucluse------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Slope	0.63	Slope	0.63	Droughty	0.70
			Dense layer	0.50	Slope	0.63
			Cutbanks cave	0.10	Depth to cemented pan	0.54
WaB:						
Wagram--------------	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.01
WcB:						
Wakulla-------------	Not limited		Very limited		Very limited	
			Cutbanks cave	1.00	Droughty	1.00
					Too sandy	0.50
Candor--------------	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.99
					Too sandy	0.50
WkB:						
Wakulla, moderately wet----------------	Not limited		Very limited		Very limited	
			Cutbanks cave	1.00	Droughty	1.00
			Depth to saturated zone	0.15	Too sandy	0.50
Candor, moderately wet----------------	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.99
			Depth to saturated zone	0.15	Too sandy	0.50

Roads and Streets, Shallow Excavations, and Lawns and Landscaping—Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WuB:						
Wakulla	Not limited		Very limited		Very limited	
			Cutbanks cave	1.00	Droughty	1.00
					Too sandy	0.50
Rimini	Not limited		Very limited		Very limited	
			Cutbanks cave	1.00	Droughty	1.00
					Too sandy	0.50

Sewage Disposal

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
AeB:				
Ailey---------------	Very limited		Very limited	
	Depth to cemented pan	1.00	Depth to cemented pan	1.00
	Slow water movement	0.50	Seepage	1.00
			Slope	0.68
AeC:				
Ailey---------------	Very limited		Very limited	
	Depth to cemented pan	1.00	Depth to cemented pan	1.00
	Slope	0.63	Slope	1.00
	Slow water movement	0.50	Seepage	1.00
AuB:				
Autryville----------	Somewhat limited		Very limited	
	Slow water movement	0.50	Seepage	1.00
	Depth to saturated zone	0.40		
BaA:				
Bibb, undrained-----	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Seepage	1.00
BlC:				
Blanton-------------	Somewhat limited		Very limited	
	Slope	0.84	Slope	1.00
	Slow water movement	0.68	Seepage	1.00
	Depth to saturated zone	0.40		
BrB:				
Bragg---------------	Very limited		Somewhat limited	
	Slow water movement	1.00	Slope	0.08
CaC:				
Candor--------------	Somewhat limited		Very limited	
	Slope	0.63	Slope	1.00
	Slow water movement	0.50	Seepage	1.00
Wakulla-------------	Very limited		Very limited	
	Seepage	1.00	Slope	1.00
	Filtering capacity	1.00	Seepage	1.00
	Slope	0.63		

Sewage Disposal—Continued

Map symbol and soil name	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
CoA:				
Coxville, drained	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00		
Coxville, undrained	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00		
DbA:				
Dunbar, drained	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00		
	Seepage	1.00		
Dunbar, undrained	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00		
	Seepage	1.00		
DpA:				
Duplin	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	1.00		
GoA:				
Goldsboro	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Slow water movement	0.50	Depth to saturated zone	1.00
GrB:				
Gritney	Very limited		Very limited	
	Slow water movement	1.00	Seepage	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	0.44
	Seepage	1.00	Slope	0.32
GrC:				
Gritney	Very limited		Very limited	
	Slow water movement	1.00	Slope	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage	1.00	Depth to saturated zone	0.44

Sewage Disposal—Continued

Map symbol and soil name	Septic tank absorption fields Rating class and limiting features	Value	Sewage lagoons Rating class and limiting features	Value
JmA:				
Johnston, undrained-	Very limited		Very limited	
	Flooding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
Johnston, drained---	Very limited		Very limited	
	Flooding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
JoA:				
Johns---------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage	1.00	Depth to saturated zone	1.00
	Flooding	0.40	Flooding	0.40
KaA:				
Kalmia--------------	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
KnB:				
Kenansville, moderately wet-----	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Depth to saturated zone	0.40		
LuA:				
Lumbee, drained-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage	1.00	Depth to saturated zone	1.00
	Flooding	0.40	Flooding	0.40
Lumbee, undrained---	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage	1.00	Depth to saturated zone	1.00
LyA:				
Lynchburg-----------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.50	Seepage	0.50
MaA:				
Mantachie-----------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.46	Seepage	0.53
	Flooding	0.40	Flooding	0.40

Sewage Disposal—Continued

Map symbol and soil name	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
McA:				
McColl, ponded------	Very limited		Very limited	
	Ponding	1.00	Ponding	1.00
	Depth to cemented pan	1.00	Depth to cemented pan	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
McColl, drained-----	Very limited		Very limited	
	Depth to cemented pan	1.00	Depth to cemented pan	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Seepage	0.32
MxA:				
Maxton--------------	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
NcA:				
Noboco--------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Slow water movement	0.50	Depth to saturated zone	1.00
NcB:				
Noboco--------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Slow water movement	0.50	Depth to saturated zone	1.00
			Slope	0.32
NoA:				
Norfolk-------------	Somewhat limited		Very limited	
	Depth to saturated zone	0.99	Seepage	1.00
	Slow water movement	0.50	Depth to saturated zone	0.71
NoB:				
Norfolk-------------	Somewhat limited		Very limited	
	Depth to saturated zone	0.99	Seepage	1.00
	Slow water movement	0.50	Depth to saturated zone	0.71
			Slope	0.32
OcA:				
Ocilla--------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.68	Seepage	1.00

Sewage Disposal—Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
OsA:				
Osier, undrained----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage	1.00	Depth to saturated zone	1.00
	Filtering capacity	1.00	Flooding	0.40
PaA:				
Pactolus------------	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage	1.00	Depth to saturated zone	1.00
	Filtering capacity	1.00		
PcA:				
Pamlico, undrained--	Very limited		Very limited	
	Flooding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
Johnston, undrained-	Very limited		Very limited	
	Flooding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
PnA:				
Pantego, drained----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.50	Seepage	1.00
	Flooding	0.40	Flooding	0.40
Pantego, undrained--	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.50	Seepage	1.00
	Flooding	0.40	Flooding	0.40
PoA, PoB:				
Pelion--------------	Very limited		Very limited	
	Depth to cemented pan	1.00	Depth to cemented pan	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	0.94
			Seepage	0.50
PoC:				
Pelion--------------	Very limited		Very limited	
	Depth to cemented pan	1.00	Depth to cemented pan	1.00
	Depth to saturated zone	1.00	Slope	1.00
	Slope	0.01	Depth to saturated zone	0.94

Sewage Disposal—Continued

Map symbol and soil name	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
PoD:				
Pelion	Very limited		Very limited	
	Depth to cemented pan	1.00	Depth to cemented pan	1.00
	Depth to saturated zone	1.00	Slope	1.00
	Slope	0.84	Depth to saturated zone	0.94
PuA:				
Plummer, undrained	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Slow water movement	0.68	Depth to saturated zone	1.00
Osier, undrained	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage	1.00	Depth to saturated zone	1.00
PxA:				
Paxville, ponded	Very limited		Very limited	
	Flooding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
Paxville, drained	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage	1.00	Depth to saturated zone	1.00
RaA:				
Rains, drained	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.50	Seepage	0.50
Rains, undrained	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slow water movement	0.50	Seepage	0.50
RuA:				
Rutlege, undrained	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage	1.00	Depth to saturated zone	1.00
	Filtering capacity	1.00	Flooding	0.40

Sewage Disposal—Continued

Map symbol and soil name	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
Rutlege, drained----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Seepage	1.00	Depth to saturated zone	1.00
	Filtering capacity	1.00	Flooding	0.40
ThA:				
Thursa--------------	Somewhat limited		Somewhat limited	
	Slow water movement	0.50	Seepage	0.50
ThB:				
Thursa--------------	Somewhat limited		Somewhat limited	
	Slow water movement	0.50	Seepage	0.50
			Slope	0.08
UcC:				
Uchee---------------	Very limited		Very limited	
	Slow water movement	1.00	Seepage	1.00
	Depth to saturated zone	0.94	Slope	1.00
	Slope	0.04		
Ud:				
Udorthents, loamy---	Somewhat limited		Very limited	
	Slow water movement	0.50	Slope	1.00
			Seepage	0.50
VaB:				
Vaucluse------------	Very limited		Very limited	
	Depth to cemented pan	1.00	Depth to cemented pan	1.00
	Seepage	1.00	Seepage	1.00
	Slow water movement	0.50	Slope	0.68
VaC:				
Vaucluse------------	Very limited		Very limited	
	Depth to cemented pan	1.00	Depth to cemented pan	1.00
	Seepage	1.00	Slope	1.00
	Slope	0.63	Seepage	1.00
WaB:				
Wagram--------------	Somewhat limited		Very limited	
	Slow water movement	0.50	Seepage	1.00
			Slope	0.08
WcB:				
Wakulla-------------	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Filtering capacity	1.00	Slope	0.32
Candor--------------	Somewhat limited		Very limited	
	Slow water movement	0.50	Seepage	1.00
			Slope	0.32

Sewage Disposal—Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
WkB:				
Wakulla, moderately wet	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Filtering capacity	1.00	Slope	0.32
	Depth to saturated zone	0.40		
Candor, moderately wet	Somewhat limited		Very limited	
	Slow water movement	0.50	Seepage	1.00
	Depth to saturated zone	0.40	Slope	0.32
WuB:				
Wakulla	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Filtering capacity	1.00	Slope	0.68
Rimini	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Filtering capacity	1.00	Slope	0.68

Landfills

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AeB:						
Ailey---------------	Somewhat limited		Very limited		Very limited	
	Too sandy	0.50	Depth to cemented pan	1.00	Depth to cemented pan	1.00
			Seepage	1.00	Seepage	1.00
					Too sandy	0.50
AeC:						
Ailey---------------	Somewhat limited		Very limited		Very limited	
	Slope	0.63	Depth to cemented pan	1.00	Depth to cemented pan	1.00
	Too sandy	0.50	Seepage	1.00	Seepage	1.00
			Slope	0.63	Slope	0.63
AuB:						
Autryville----------	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	0.50
	Too sandy	0.50	Seepage	1.00		
BaA:						
Bibb, undrained-----	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	0.50
	Seepage	1.00	Seepage	1.00		
BlC:						
Blanton-------------	Very limited		Very limited		Very limited	
	Too sandy	1.00	Seepage	1.00	Too sandy	1.00
	Slope	0.84	Slope	0.84	Seepage	1.00
					Slope	0.84
BrB:						
Bragg---------------	Not limited		Not limited		Not limited	
CaC:						
Candor--------------	Very limited		Very limited		Very limited	
	Too sandy	1.00	Seepage	1.00	Too sandy	1.00
	Slope	0.63	Slope	0.63	Seepage	1.00
					Slope	0.63
Wakulla-------------	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.63	Seepage	1.00
	Slope	0.63			Slope	0.63
CoA:						
Coxville, drained---	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too clayey	0.50				

Landfills—Continued

Map symbol and soil name	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
Coxville, undrained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too clayey	0.50				
DbA:						
Dunbar, drained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.99
	Seepage	1.00			Hard to compact	0.50
	Too clayey	0.50				
Dunbar, undrained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.99
	Seepage	1.00			Hard to compact	0.50
	Too clayey	0.50				
DpA:						
Duplin	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.47
	Too clayey	0.50				
GoA:						
Goldsboro	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.47
GrB, GrC:						
Gritney	Very limited		Somewhat limited		Very limited	
	Too clayey	1.00	Depth to saturated zone	0.44	Too clayey	1.00
	Seepage	1.00			Depth to saturated zone	0.68
	Depth to saturated zone	0.95				
JmA:						
Johnston, undrained	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Seepage	1.00
Johnston, drained	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Seepage	1.00
JoA:						
Johns	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.68
	Seepage	1.00	Seepage	1.00		
	Flooding	0.40	Flooding	0.40		
KaA:						
Kalmia	Very limited		Very limited		Not limited	
	Seepage	1.00	Seepage	1.00		

Landfills—Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
KnB:						
Kenansville, moderately wet-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	1.00				
LuA:						
Lumbee, drained-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Seepage	1.00		
	Flooding	0.40	Flooding	0.40		
Lumbee, undrained---	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Seepage	1.00		
LyA:						
Lynchburg-----------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
MaA:						
Mantachie-----------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	0.40	Flooding	0.40		
McA:						
McColl, ponded------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Depth to thick cemented pan	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
McColl, drained-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
	Depth to thick cemented pan	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
MxA:						
Maxton--------------	Very limited		Very limited		Not limited	
	Seepage	1.00	Seepage	1.00		
NcA, NcB:						
Noboco--------------	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.47
NoA, NoB:						
Norfolk-------------	Very limited		Very limited		Not limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		

Landfills—Continued

Map symbol and soil name	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
OcA:						
Ocilla--------------	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.96
			Seepage	1.00		
OsA:						
Osier, undrained----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	0.50	Flooding	0.40	Too sandy	0.50
PaA:						
Pactolus------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
	Seepage	1.00	Seepage	1.00	Depth to saturated zone	0.68
	Too sandy	0.50			Too sandy	0.50
PcA:						
Pamlico, undrained--	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Seepage	1.00
Johnston, undrained-	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Seepage	1.00
PnA:						
Pantego, drained----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	0.40	Flooding	0.40		
Pantego, undrained--	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	0.40	Flooding	0.40		
PoA, PoB:						
Pelion--------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
			Depth to saturated zone	1.00	Depth to saturated zone	0.96
PoC:						
Pelion--------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
	Slope	0.01	Depth to saturated zone	1.00	Depth to saturated zone	0.96
			Slope	0.01	Slope	0.01

Landfills—Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
PoD:						
Pelion	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
	Slope	0.84	Depth to saturated zone	1.00	Depth to saturated zone	0.96
			Slope	0.84	Slope	0.84
PuA:						
Plummer, undrained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too sandy	0.50	Seepage	1.00	Seepage	1.00
					Too sandy	0.50
Osier, undrained	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
	Seepage	1.00	Seepage	1.00	Too sandy	0.50
PxA:						
Paxville, ponded	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Ponding	1.00
	Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Depth to saturated zone	1.00	Seepage	1.00
Paxville, drained	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
	Seepage	1.00				
RaA:						
Rains, drained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Rains, undrained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
RuA:						
Rutlege, undrained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Flooding	0.40	Seepage	1.00
Rutlege, drained	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Flooding	0.40	Seepage	1.00
ThA, ThB:						
Thursa	Not limited		Not limited		Not limited	

Landfills—Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
UcC:						
Uchee----------------	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.04	Seepage	1.00	Slope	0.04
			Slope	0.04		
Ud:						
Udorthents, loamy---	Not limited		Not limited		Not limited	
VaB:						
Vaucluse------------	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
VaC:						
Vaucluse------------	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to cemented pan	1.00	Depth to cemented pan	1.00
	Slope	0.63	Slope	0.63	Slope	0.63
WaB:						
Wagram--------------	Not limited		Very limited		Not limited	
			Seepage	1.00		
WcB:						
Wakulla-------------	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
Candor--------------	Very limited		Very limited		Very limited	
	Too sandy	1.00	Seepage	1.00	Too sandy	1.00
					Seepage	1.00
WkB:						
Wakulla, moderately wet----------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	1.00				
Candor, moderately wet----------------	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
	Too sandy	1.00	Seepage	1.00	Seepage	1.00
WuB:						
Wakulla-------------	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
Rimini--------------	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00

Source of Gravel and Sand

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Potential source of gravel		Potential source of sand	
	Rating class	Value	Rating class	Value
AeB, AeC:				
Ailey---------------	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.02
	Thickest layer	0.00	Thickest layer	0.10
AuB:				
Autryville----------	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.05
BaA:				
Bibb, undrained-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.04
BlC:				
Blanton-------------	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.72
BrB:				
Bragg---------------	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
CaC:				
Candor--------------	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.44
Wakulla-------------	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.10
	Thickest layer	0.00	Bottom layer	0.64
CoA:				
Coxville, drained---	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Coxville, undrained-	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
DbA:				
Dunbar, drained-----	Poor		Poor	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.00
Dunbar, undrained---	Poor		Poor	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.00

Source of Gravel and Sand—Continued

Map symbol and soil name	Potential source of gravel		Potential source of sand	
	Rating class	Value	Rating class	Value
DpA:				
Duplin--------------	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
GoA:				
Goldsboro-----------	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
GrB, GrC:				
Gritney-------------	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
JmA:				
Johnston, undrained-	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.02
Johnston, drained---	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.02
JoA:				
Johns---------------	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.01
	Thickest layer	0.00	Bottom layer	0.23
KaA:				
Kalmia--------------	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.01
	Thickest layer	0.00	Bottom layer	0.10
KnB:				
Kenansville, moderately wet-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.10
	Thickest layer	0.00	Bottom layer	0.57
LuA:				
Lumbee, drained-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.01
	Thickest layer	0.00	Bottom layer	0.10
Lumbee, undrained---	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.01
	Thickest layer	0.00	Bottom layer	0.10
LyA:				
Lynchburg-----------	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
MaA:				
Mantachie-----------	Poor		Poor	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.00

Source of Gravel and Sand—Continued

Map symbol and soil name	Potential source of gravel		Potential source of sand	
	Rating class	Value	Rating class	Value
McA:				
McColl, ponded------	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
McColl, drained-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
MxA:				
Maxton--------------	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.64
NcA, NcB:				
Noboco--------------	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.12
NoA, NoB:				
Norfolk-------------	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
OcA:				
Ocilla--------------	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.07
OsA:				
Osier, undrained----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.47
	Thickest layer	0.00	Thickest layer	0.58
PaA:				
Pactolus------------	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.10
	Thickest layer	0.00	Bottom layer	0.36
PcA:				
Pamlico, undrained--	Not rated		Not rated	
Johnston, undrained-	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.02
PnA:				
Pantego, drained----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Pantego, undrained--	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
PoA, PoB, PoC, PoD:				
Pelion--------------	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Source of Gravel and Sand—Continued

Map symbol and soil name	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
PuA:				
Plummer, undrained	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.02
	Thickest layer	0.00	Thickest layer	0.11
Osier, undrained	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.47
	Thickest layer	0.00	Thickest layer	0.58
PxA:				
Paxville, ponded	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.14
Paxville, drained	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.14
RaA:				
Rains, drained	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Rains, undrained	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
RuA:				
Rutlege, undrained	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.10
	Thickest layer	0.00	Bottom layer	0.42
Rutlege, drained	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.10
	Thickest layer	0.00	Bottom layer	0.42
ThA, ThB:				
Thursa	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.04
UcC:				
Uchee	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Ud:				
Udorthents, loamy	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
VaB, VaC:				
Vaucluse	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.04
WaB:				
Wagram	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.10

Source of Gravel and Sand—Continued

Map symbol and soil name	Potential source of gravel		Potential source of sand	
	Rating class	Value	Rating class	Value
WcB:				
Wakulla----------------	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.10
	Thickest layer	0.00	Bottom layer	0.64
Candor----------------	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.44
WkB:				
Wakulla, moderately wet----------------	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.10
	Thickest layer	0.00	Bottom layer	0.64
Candor, moderately wet----------------	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.44
WuB:				
Wakulla----------------	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.10
	Thickest layer	0.00	Bottom layer	0.64
Rimini----------------	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.89
	Thickest layer	0.00	Thickest layer	0.89

Source of Reclamation Material, Roadfill, and Topsoil

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
AeB:						
Ailey	Poor		Good		Fair	
	Wind erosion	0.00			Too sandy	0.02
	Droughty	0.00			Hard to reclaim (dense layer)	0.94
	Too sandy	0.02			Rock fragments	0.97
AeC:						
Ailey	Poor		Good		Fair	
	Wind erosion	0.00			Too sandy	0.02
	Droughty	0.00			Slope	0.37
	Too sandy	0.02			Hard to reclaim (dense layer)	0.94
AuB:						
Autryville	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00				
	Organic matter content low	0.12				
BaA:						
Bibb, undrained	Poor		Poor		Poor	
	Wind erosion	0.00	Wetness depth	0.00	Wetness depth	0.00
	Too acid	0.12			Too acid	0.59
	Water erosion	0.90				
BlC:						
Blanton	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Slope	0.16
	Organic matter content low	0.12			Too acid	0.98
BrB:						
Bragg	Fair		Good		Fair	
	Too acid	0.50			Too acid	0.88
	Organic matter content low	0.50				
CaC:						
Candor	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Slope	0.37
	Too acid	0.12			Too acid	0.76
Wakulla	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Slope	0.37
	Droughty	0.04			Too acid	0.98

Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CoA:						
Coxville, drained---	Poor		Poor		Poor	
	Too clayey	0.00	Wetness depth	0.00	Wetness depth	0.00
	Organic matter content low	0.12	Low strength	0.10	Too clayey	0.00
	Too acid	0.16			Too acid	0.68
Coxville, undrained-	Poor		Poor		Poor	
	Too clayey	0.00	Wetness depth	0.00	Wetness depth	0.00
	Organic matter content low	0.12	Low strength	0.10	Too clayey	0.00
	Too acid	0.16			Too acid	0.68
DbA:						
Dunbar, drained-----	Poor		Fair		Poor	
	Too clayey	0.00	Low strength	0.10	Too clayey	0.00
	Organic matter content low	0.12	Wetness depth	0.14	Wetness depth	0.14
			Shrink-swell	0.91	Too acid	0.88
	Too acid	0.32				
Dunbar, undrained---	Poor		Fair		Poor	
	Too clayey	0.00	Low strength	0.10	Too clayey	0.00
	Organic matter content low	0.12	Wetness depth	0.14	Wetness depth	0.14
			Shrink-swell	0.91	Too acid	0.88
	Too acid	0.32				
DpA:						
Duplin--------------	Poor		Fair		Poor	
	Too clayey	0.00	Low strength	0.10	Too clayey	0.00
	Organic matter content low	0.12	Shrink-swell	0.87	Too acid	0.88
			Wetness depth	0.89	Wetness depth	0.89
	Too acid	0.32				
GoA:						
Goldsboro-----------	Poor		Poor		Fair	
	Wind erosion	0.00	Low strength	0.00	Too acid	0.68
	Organic matter content low	0.12	Wetness depth	0.89	Wetness depth	0.89
	Too acid	0.16				
GrB, GrC:						
Gritney-------------	Poor		Poor		Poor	
	Too clayey	0.00	Low strength	0.00	Too clayey	0.00
	Too acid	0.08	Wetness depth	0.76	Too acid	0.50
	Organic matter content low	0.12	Shrink-swell	0.89	Wetness depth	0.76
JmA:						
Johnston, undrained-	Fair		Poor		Poor	
	Too acid	0.50	Wetness depth	0.00	Wetness depth	0.00
					Too acid	0.88
Johnston, drained---	Fair		Poor		Poor	
	Too acid	0.50	Wetness depth	0.00	Wetness depth	0.00
					Too acid	0.88

Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
JoA:						
Johns	Fair		Fair		Fair	
	Organic matter content low	0.12	Wetness depth	0.76	Too acid	0.68
					Wetness depth	0.76
	Droughty	0.27				
	Too acid	0.50				
KaA:						
Kalmia	Poor		Good		Fair	
	Wind erosion	0.00			Too acid	0.68
	Droughty	0.09				
	Organic matter content low	0.12				
KnB:						
Kenansville, moderately wet	Poor		Good		Poor	
	Wind erosion	0.00			Too sandy	0.00
	Too sandy	0.00			Too acid	0.98
	Organic matter content low	0.02				
LuA:						
Lumbee, drained	Fair		Poor		Poor	
	Droughty	0.11	Wetness depth	0.00	Wetness depth	0.00
	Organic matter content low	0.12			Too acid	0.68
	Too acid	0.50				
Lumbee, undrained	Fair		Poor		Poor	
	Droughty	0.11	Wetness depth	0.00	Wetness depth	0.00
	Organic matter content low	0.12			Too acid	0.68
	Too acid	0.50				
LyA:						
Lynchburg	Fair		Poor		Poor	
	Organic matter content low	0.12	Wetness depth	0.00	Wetness depth	0.00
					Too acid	0.68
	Too acid	0.16				
MaA:						
Mantachie	Fair		Poor		Poor	
	Too acid	0.50	Wetness depth	0.00	Wetness depth	0.00
	Organic matter content low	0.88			Too acid	0.88
	Water erosion	0.99				
McA:						
McColl, ponded	Fair		Poor		Poor	
	Droughty	0.01	Wetness depth	0.00	Hard to reclaim (dense layer)	0.00
	Organic matter content low	0.12	Depth to cemented pan	0.00	Wetness depth	0.00
	Too acid	0.32			Too clayey	0.29

Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
McColl, drained-----	Fair		Poor		Poor	
	Droughty	0.01	Wetness depth	0.00	Hard to reclaim (dense layer)	0.00
	Organic matter content low	0.12	Depth to cemented pan	0.00	Wetness depth	0.00
	Too acid	0.32			Too clayey	0.29
MxA:						
Maxton--------------	Poor		Good		Fair	
	Wind erosion	0.00			Too acid	0.88
	Organic matter content low	0.12				
	Droughty	0.18				
NcA, NcB:						
Noboco--------------	Poor		Fair		Fair	
	Wind erosion	0.00	Wetness depth	0.89	Too acid	0.59
	Organic matter content low	0.12			Wetness depth	0.89
	Too acid	0.50				
NoA, NoB:						
Norfolk-------------	Poor		Good		Fair	
	Wind erosion	0.00			Too acid	0.50
	Too acid	0.08				
	Organic matter content low	0.12				
OcA:						
Ocilla--------------	Poor		Fair		Poor	
	Too sandy	0.00	Wetness depth	0.29	Too sandy	0.00
	Wind erosion	0.00			Wetness depth	0.29
	Organic matter content low	0.12			Too acid	0.88
OsA:						
Osier, undrained----	Poor		Poor		Poor	
	Too sandy	0.00	Wetness depth	0.00	Too sandy	0.00
	Wind erosion	0.00			Wetness depth	0.00
	Too acid	0.20			Too acid	0.76
PaA:						
Pactolus------------	Poor		Fair		Fair	
	Wind erosion	0.00	Wetness depth	0.76	Too sandy	0.01
	Too sandy	0.01			Too acid	0.50
	Too acid	0.08			Wetness depth	0.76
PcA:						
Pamlico, undrained--	Not rated		Poor		Not rated	
			Wetness depth	0.00		
Johnston, undrained-	Fair		Poor		Poor	
	Too acid	0.50	Wetness depth	0.00	Wetness depth	0.00
					Too acid	0.88
PnA:						
Pantego, drained----	Fair		Poor		Poor	
	Organic matter content low	0.12	Wetness depth	0.00	Wetness depth	0.00
			Low strength	0.22	Too acid	0.50
	Too acid	0.50				

Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
Pantego, undrained	Fair		Poor		Poor	
	Organic matter content low	0.12	Wetness depth	0.00	Wetness depth	0.00
	Too acid	0.50	Low strength	0.22	Too acid	0.50
PoA, PoB, PoC:						
Pelion	Poor		Fair		Fair	
	Wind erosion	0.00	Wetness depth	0.29	Wetness depth	0.29
	Droughty	0.00			Too acid	0.59
	Organic matter content low	0.12				
PoD:						
Pelion	Poor		Fair		Fair	
	Wind erosion	0.00	Wetness depth	0.29	Slope	0.16
	Droughty	0.00			Wetness depth	0.29
	Organic matter content low	0.12			Too acid	0.59
PuA:						
Plummer, undrained	Poor		Poor		Poor	
	Too sandy	0.00	Wetness depth	0.00	Too sandy	0.00
	Wind erosion	0.00			Wetness depth	0.00
	Too acid	0.12			Too acid	0.59
Osier, undrained	Poor		Poor		Poor	
	Too sandy	0.00	Wetness depth	0.00	Too sandy	0.00
	Wind erosion	0.00			Wetness depth	0.00
	Too acid	0.20			Too acid	0.76
PxA:						
Paxville, ponded	Fair		Poor		Poor	
	Too acid	0.12	Wetness depth	0.00	Wetness depth	0.00
	Organic matter content low	0.88			Too acid	0.59
Paxville, drained	Fair		Poor		Poor	
	Too acid	0.12	Wetness depth	0.00	Wetness depth	0.00
	Organic matter content low	0.88			Too acid	0.59
RaA:						
Rains, drained	Fair		Poor		Poor	
	Too acid	0.12	Wetness depth	0.00	Wetness depth	0.00
	Organic matter content low	0.88	Low strength	0.78	Too acid	0.59
Rains, undrained	Fair		Poor		Poor	
	Too acid	0.12	Wetness depth	0.00	Wetness depth	0.00
	Organic matter content low	0.88	Low strength	0.78	Too acid	0.59
RuA:						
Rutlege, undrained	Poor		Poor		Poor	
	Too sandy	0.00	Wetness depth	0.00	Too sandy	0.00
	Wind erosion	0.00			Wetness depth	0.00
	Too acid	0.50			Too acid	0.59

Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Rutlege, drained----	Poor		Poor		Poor	
	Too sandy	0.00	Wetness depth	0.00	Too sandy	0.00
	Wind erosion	0.00			Wetness depth	0.00
	Too acid	0.50			Too acid	0.59
ThA, ThB:						
Thursa--------------	Poor		Good		Fair	
	Wind erosion	0.00			Too acid	0.95
	Organic matter content low	0.08				
	Too acid	0.46				
UcC:						
Uchee---------------	Poor		Fair		Poor	
	Wind erosion	0.00	Shrink-swell	0.98	Too sandy	0.00
	Too sandy	0.00			Too acid	0.88
	Organic matter content low	0.12			Slope	0.96
Ud:						
Udorthents, loamy---	Fair		Good		Not rated	
	Organic matter content low	0.02				
	Too acid	0.54				
VaB:						
Vaucluse------------	Poor		Good		Poor	
	Wind erosion	0.00			Hard to reclaim (dense layer)	0.00
	Droughty	0.00			Too acid	0.59
	Organic matter content low	0.02				
VaC:						
Vaucluse------------	Poor		Good		Poor	
	Wind erosion	0.00			Hard to reclaim (dense layer)	0.00
	Droughty	0.00			Slope	0.37
	Organic matter content low	0.02			Too acid	0.59
WaB:						
Wagram--------------	Poor		Good		Poor	
	Wind erosion	0.00			Too sandy	0.00
	Too sandy	0.00			Too acid	0.98
	Organic matter content low	0.12				
WcB:						
Wakulla-------------	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Too acid	0.98
	Droughty	0.04				
Candor--------------	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Too acid	0.76
	Too acid	0.12				

Source of Reclamation Material, Roadfill, and Topsoil—Continued

Map symbol and soil name	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
WkB:						
Wakulla, moderately wet	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Too acid	0.98
	Droughty	0.04				
Candor, moderately wet	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Too acid	0.76
	Too acid	0.12				
WuB:						
Wakulla	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Too acid	0.98
	Droughty	0.04				
Rimini	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Too acid	0.76
	Organic matter content low	0.02				

Ponds and Embankments

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
AeB:						
Ailey	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.66	Depth to water	1.00
	Depth to cemented pan	0.66	Seepage	0.10		
AeC:						
Ailey	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.66	Depth to water	1.00
	Depth to cemented pan	0.66	Seepage	0.10		
	Slope	0.01				
AuB:						
Autryville	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.05	Depth to water	1.00
					Slow refill	0.30
BaA:						
Bibb, undrained	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Piping	1.00		
			Seepage	0.04		
BlC:						
Blanton	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.72	Depth to water	1.00
	Slope	0.01				
BrB:						
Bragg	Somewhat limited		Not limited		Very limited	
	Seepage	0.05			Depth to water	1.00
CaC:						
Candor	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.82	Depth to water	1.00
	Slope	0.01				
Wakulla	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.64	Depth to water	1.00
	Slope	0.01				
CoA:						
Coxville, drained	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.05	Depth to saturated zone	1.00	Slow refill	0.30
					Cutbanks cave	0.10
Coxville, undrained	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.05	Depth to saturated zone	1.00	Slow refill	0.30
					Cutbanks cave	0.10

Ponds and Embankments—Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
DbA:						
Dunbar, drained-----	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.37		
			Seepage	0.01		
Dunbar, undrained---	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.37		
			Seepage	0.01		
DpA:						
Duplin--------------	Somewhat limited		Somewhat limited		Somewhat limited	
	Seepage	0.05	Depth to saturated zone	0.86	Slow refill	0.95
					Cutbanks cave	0.10
			Hard to pack	0.02	Depth to saturated zone	0.06
GoA:						
Goldsboro-----------	Somewhat limited		Somewhat limited		Somewhat limited	
	Seepage	0.70	Depth to saturated zone	0.86	Slow refill	0.30
					Cutbanks cave	0.10
					Depth to saturated zone	0.06
GrB, GrC:						
Gritney-------------	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Depth to saturated zone	0.95	Depth to water	1.00
JmA:						
Johnston, undrained-	Very limited		Very limited		Very limited	
	Seepage	1.00	Ponding	1.00	Cutbanks cave	1.00
			Depth to saturated zone	1.00		
			Seepage	0.02		
Johnston, drained---	Very limited		Very limited		Very limited	
	Seepage	1.00	Ponding	1.00	Cutbanks cave	1.00
			Depth to saturated zone	1.00		
			Seepage	0.02		
JoA:						
Johns---------------	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Depth to saturated zone	0.95	Cutbanks cave	1.00
			Thin layer	0.86	Depth to saturated zone	0.0
			Seepage	0.23		
KaA:						
Kalmia--------------	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.86	Depth to water	1.00
			Seepage	0.10		

Ponds and Embankments—Continued

Map symbol and soil name	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
KnB:						
Kenansville, moderately wet	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.57	Depth to water	1.00
LuA:						
Lumbee, drained	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Thin layer	0.86		
			Seepage	0.10		
Lumbee, undrained	Very limited		Very limited		Very limited	
	Seepage	1.00	Ponding	1.00	Cutbanks cave	1.00
			Depth to saturated zone	1.00		
			Thin layer	0.86		
LyA:						
Lynchburg	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.70	Depth to saturated zone	1.00	Cutbanks cave	0.10
			Seepage	0.01		
MaA:						
Mantachie	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
					Cutbanks cave	0.10
			Piping	1.00		
			Seepage	0.01		
McA:						
McColl, ponded	Somewhat limited		Very limited		Somewhat limited	
	Depth to cemented pan	0.92	Ponding	1.00	Slow refill	0.30
			Depth to saturated zone	1.00	Cutbanks cave	0.10
	Seepage	0.57				
			Piping	0.98		
McColl, drained	Somewhat limited		Very limited		Somewhat limited	
	Depth to cemented pan	0.92	Depth to saturated zone	1.00	Slow refill	0.30
					Cutbanks cave	0.10
	Seepage	0.57	Piping	0.98		
			Thin layer	0.92		
MxA:						
Maxton	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.86	Depth to water	1.00
			Seepage	0.64		
NcA, NcB:						
Noboco	Somewhat limited		Somewhat limited		Somewhat limited	
	Seepage	0.70	Depth to saturated zone	0.86	Slow refill	0.30
					Cutbanks cave	0.10
			Seepage	0.12	Depth to saturated zone	0.06

Ponds and Embankments—Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
NoA, NoB:						
Norfolk	Somewhat limited		Not limited		Somewhat limited	
	Seepage	0.70			Depth to saturated zone	0.81
					Slow refill	0.30
					Cutbanks cave	0.10
OcA:						
Ocilla	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.07		
OsA:						
Osier, undrained	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.58		
PaA:						
Pactolus	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Depth to saturated zone	0.95	Cutbanks cave	1.00
			Seepage	0.36	Depth to saturated zone	0.02
PcA:						
Pamlico, undrained	Very limited		Not rated		Very limited	
	Seepage	1.00			Cutbanks cave	1.00
Johnston, undrained	Very limited		Very limited		Very limited	
	Seepage	1.00	Ponding	1.00	Cutbanks cave	1.00
			Depth to saturated zone	1.00		
			Seepage	0.02		
PnA:						
Pantego, drained	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.70	Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.71		
Pantego, undrained	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.70	Depth to saturated zone	1.00	Cutbanks cave	0.10
			Piping	0.71		
PoA, PoB, PoC:						
Pelion	Somewhat limited		Very limited		Somewhat limited	
	Depth to cemented pan	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.87
	Seepage	0.70	Thin layer	0.99	Slow refill	0.30
					Cutbanks cave	0.10
PoD:						
Pelion	Somewhat limited		Very limited		Somewhat limited	
	Depth to cemented pan	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.87
	Seepage	0.70	Thin layer	0.99	Slow refill	0.30
	Slope	0.01			Cutbanks cave	0.10

Ponds and Embankments—Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
PuA:						
Plummer, undrained--	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.11		
Osier, undrained----	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.58		
PxA:						
Paxville, ponded----	Very limited		Very limited		Very limited	
	Seepage	1.00	Ponding	1.00	Cutbanks cave	1.00
			Depth to saturated zone	1.00		
			Seepage	0.14		
Paxville, drained---	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.14		
RaA:						
Rains, drained------	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.70	Depth to saturated zone	1.00	Cutbanks cave	0.10
Rains, undrained----	Somewhat limited		Very limited		Somewhat limited	
	Seepage	0.70	Depth to saturated zone	1.00	Cutbanks cave	0.10
RuA:						
Rutlege, undrained--	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.42		
Rutlege, drained----	Very limited		Very limited		Very limited	
	Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
			Seepage	0.42		
ThA, ThB:						
Thursa--------------	Somewhat limited		Somewhat limited		Very limited	
	Seepage	0.70	Seepage	0.04	Depth to water	1.00
UcC:						
Uchee---------------	Very limited		Not limited		Very limited	
	Seepage	1.00			Depth to water	1.00
Ud:						
Udorthents, loamy---	Somewhat limited		Not limited		Very limited	
	Seepage	0.70			Depth to water	1.00

Ponds and Embankments—Continued

Map symbol and soil name	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
VaB:						
Vaucluse	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.88	Depth to water	1.00
	Depth to cemented pan	0.88	Seepage	0.04		
VaC:						
Vaucluse	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Thin layer	0.88	Depth to water	1.00
	Depth to cemented pan	0.88	Seepage	0.04		
	Slope	0.01				
WaB:						
Wagram	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.10	Depth to water	1.00
WcB:						
Wakulla	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.64	Depth to water	1.00
Candor	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.82	Depth to water	1.00
WkB:						
Wakulla, moderately wet	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.64	Depth to water	1.00
Candor, moderately wet	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.82	Depth to water	1.00
WuB:						
Wakulla	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.64	Depth to water	1.00
Rimini	Very limited		Somewhat limited		Very limited	
	Seepage	1.00	Seepage	0.89	Depth to water	1.00

Engineering Properties

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
AeB:												
Ailey-----------	0-5	Loamy sand, sand	SM, SP-SM	A-2-4, A-3	0	0	85-100	75-100	50-80	5-20	10-14	NP
	5-24	Loamy sand, sand	SP-SM, SM	A-2-4, A-3	0	0	85-100	75-100	50-80	5-20	10-14	NP
	24-36	Sandy clay loam, sandy loam	SC, SC-SM, SM	A-2-4, A-4, A-6	0	0	90-100	75-100	60-90	30-40	20-40	3-16
	36-50	Sandy clay loam, sandy loam	SM, SC, SC-SM	A-2-4, A-4, A-6	0	0	90-100	75-100	55-90	20-50	20-40	3-16
	50-80	Sandy loam, coarse sandy loam, sandy clay loam	SC-SM, SM, SC	A-2-4, A-4, A-6	0	0	85-100	75-100	50-85	15-40	10-40	NP-14
AeC:												
Ailey-----------	0-5	Loamy sand, sand	SM, SP-SM	A-2-4, A-3	0	0	85-100	75-100	50-80	5-20	10-14	NP
	5-24	Loamy sand, sand	SM, SP-SM	A-2-4, A-3	0	0	85-100	75-100	50-80	5-20	10-14	NP
	24-36	Sandy clay loam, sandy loam	SC, SC-SM, SM	A-2-4, A-4, A-6	0	0	90-100	75-100	60-90	30-40	20-40	3-16
	36-50	Sandy clay loam, sandy loam	SC-SM, SM, SC	A-2-4, A-4, A-6	0	0	90-100	75-100	55-90	20-50	20-40	3-16
	50-80	Sandy loam, coarse sandy loam, sandy clay loam	SM, SC-SM, SC	A-2-4, A-4, A-6	0	0	85-100	75-100	50-85	15-40	10-40	NP-14

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
AuB:												
Autryville------	0-9	Sand, loamy sand	SP-SM, SC-SM, SM	A-2-4, A-3	0	0	100	100	50-100	5-20	10-20	NP
	9-26	Loamy sand, loamy fine sand, sand	SP-SM, SC-SM, SM	A-2-4, A-3	0	0	100	100	50-100	5-20	10-20	NP
	26-46	Loamy sand, loamy fine sand, fine sandy loam, sandy loam	SM	A-2-4	0	0	100	100	50-100	15-30	15-30	NP-3
	46-58	Loamy sand, sandy loam, fine sandy loam, loamy fine sand, sand, fine sand	SP-SM, SC-SM, SM	A-2-4, A-3	0	0	100	100	50-100	5-20	10-20	NP
	58-85	Sandy clay loam, sandy loam, fine sandy loam, loamy fine sand	SC-SM, SM	A-2-4, A-4	0	0	100	100	60-100	20-49	15-40	NP-10
BaA:												
Bibb, undrained-	0-6	Loamy sand, sandy loam, fine sandy loam, loam, silt loam	CL-ML, ML	A-4	0	0-5	95-100	90-100	80-90	50-80	0-25	NP-7
	6-60	Sandy loam, loamy sand, loam, sand	CL-ML, ML	A-4	0	0-5	95-100	90-100	80-90	50-80	0-25	NP-7
	60-80	Loamy sand, sandy loam, loam, sand	CL-ML, ML, SM, SC-SM	A-2, A-4	0	0-10	75-100	75-100	40-100	30-90	0-30	NP-7

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Johnston, undrained------	0-30	Mucky loam	ML, OL, CL-ML	A-4, A-5, A-6, A-7-5	0	0	100	100	90-100	51-75	20-45	2-14
	30-34	Loamy fine sand, fine sandy loam, stratified loamy sand to sand	SP-SM, SM	A-2, A-3	0	0	100	100	50-100	5-30	15-20	NP
	34-80	Fine sandy loam, loamy fine sand, stratified sand to loamy sand	SM	A-2, A-4	0	0	100	100	50-100	25-49	15-35	NP-10
BlC:												
Blanton---------	0-7	Sand, loamy sand	SM, SP-SM	A-2-4, A-3	0	0	100	90-100	65-100	5-20	0-14	NP
	7-52	Sand, loamy sand	SP-SM, SM	A-2-4, A-3	0	0	100	90-100	65-100	5-20	0-14	NP
	52-67	Sandy loam, fine sandy loam, loamy sand, loamy coarse sand, sandy clay loam	SM	A-2-4	0	0	100	95-100	65-96	13-30	0-25	NP-3
	67-85	Sandy clay loam, sandy loam, fine sandy loam, sandy clay	SC-SM, SC, SM	A-2-4, A-2-6, A-4, A-6	0	0	100	95-100	69-100	25-50	12-45	3-22
BrB:												
Bragg-----------	0-6	Loamy sand, loamy fine sand	SM	A-2-4	0	0	100	100	50-95	15-35	10-14	NP
	6-30	Sandy clay loam	CL, SC, SC-SM, SM	A-2, A-4, A-6, A-7-6	0	0-3	95-100	90-100	50-95	25-65	20-49	3-25
	30-80	Sandy loam, sandy clay loam, sandy clay	ML, CL, SC, SM	A-4, A-6	0	0-3	95-100	95-100	60-95	39-60	25-40	3-18

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
CaC:												
Candor----------	0-8	Sand	SM, SP-SM	A-2, A-2-4, A-3	0	0-2	98-100	96-100	55-90	5-15	0-14	NP
	8-26	Sand	SP-SM, SM	A-3, A-2, A-2-4	0	0-2	98-100	96-100	55-90	5-15	0-14	NP
	26-38	Loamy sand	SP-SM, SM	A-2-4, A-2	0	0-2	98-100	96-100	63-90	10-25	0-14	NP
	38-62	Sand	SM, SP-SM	A-2, A-3	0	0-7	90-100	90-100	55-90	5-15	0-14	NP
	62-80	Sandy clay loam	SC-SM, SM, SC	A-2, A-4, A-6, A-7	0	0-7	90-100	90-100	55-90	25-49	0-45	NP-25
Wakulla---------	0-7	Sand, fine sand, coarse sand	SP-SM	A-3	0	0	100	100	55-90	4-10	10-14	NP
	7-24	Sand, fine sand, coarse sand	SP-SM	A-3	0	0	100	100	55-90	4-10	10-14	NP
	24-42	Loamy sand, loamy fine sand, loamy coarse sand	SC-SM, SP-SM, SM	A-2-4	0	0	100	100	55-85	10-25	15-20	NP
	42-85	Sand, fine sand, coarse sand	SM	A-2, A-3	0	0	100	100	50-70	4-15	10-14	NP
CoA:												
Coxville, drained--------	0-9	Loam, sandy loam, fine sandy loam	CL, CL-ML, ML, SM	A-4, A-6, A-7	0	0	80-100	75-100	65-95	45-75	20-46	3-15
	9-11	Fine sandy loam, loam, sandy loam	SM, CL-ML, CL, ML	A-4, A-6, A-7	0	0	80-100	75-100	65-95	45-75	20-46	3-15
	11-72	Sandy clay, clay loam, clay	CL, CH	A-6, A-7	0	0	80-100	75-100	65-100	35-95	40-65	13-35
	72-80	Sandy clay loam, loamy sand, sand, sandy loam, sandy clay	SC, SC-SM, SM, CL	A-2-4, A-7-6, A-6	0	0	100	100	50-95	5-60	7-55	NP-25

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Coxville, undrained------	0-9	Loam, sandy loam, fine sandy loam	SM, ML, CL-ML, CL	A-4, A-6, A-7	0	0	80-100	75-100	65-95	45-75	20-46	3-15
	9-11	Fine sandy loam, loam, sandy loam	SM, ML, CL-ML, CL	A-4, A-6, A-7	0	0	80-100	75-100	65-95	45-75	20-46	3-15
	11-72	Sandy clay, clay loam, clay	CH, CL	A-6, A-7	0	0	80-100	75-100	65-100	35-95	40-65	13-35
	72-80	Sandy clay loam, loamy sand, sand, sandy loam, sandy clay	SC-SM, SC, SM, CL	A-2-4, A-7-6, A-6	0	0	100	100	50-95	5-60	7-55	NP-25
DbA: Dunbar, drained-	0-8	Fine sandy loam, sandy loam, loam	SC, SC-SM, SM	A-2, A-4	0	0	100	100	50-95	20-50	20-35	3-15
	8-14	Loam, sandy clay loam, clay loam	SC, CL	A-4, A-6	0	0	95-100	90-100	65-98	45-85	24-40	8-22
	14-62	Sandy clay, clay loam, clay	ML, MH, CL, CH	A-6, A-7	0	0	100	100	85-95	50-70	40-65	12-25
	62-92	Sandy clay, sandy clay loam, sandy loam, loamy sand	CL, CH	A-4, A-6, A-7	0	0	80-100	75-100	40-100	3-80	7-55	NP-25

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Dunbar, undrained------	0-8	Fine sandy loam, sandy loam, loam	SM, SC-SM, SC	A-2, A-4	0	0	100	100	50-95	20-50	20-35	3-15
	8-14	Loam, sandy clay loam, clay loam	SC, CL	A-4, A-6	0	0	95-100	90-100	65-98	45-85	24-40	8-22
	14-62	Sandy clay, clay loam, clay	CH, CL, MH, ML	A-6, A-7	0	0	100	100	85-95	50-70	40-65	12-25
	62-92	Sandy clay, sandy clay loam, sandy loam, loamy sand	CL, CH	A-4, A-6, A-7	0	0	80-100	75-100	40-100	3-80	7-55	NP-25
DpA:												
Duplin----------	0-8	Sandy loam	SM, SC-SM	A-2-4, A-4	0	0	100	100	67-98	20-49	15-30	NP-7
	8-84	Sandy clay, clay loam, clay	ML, CL, CH, SC	A-6, A-7	0	0	100	98-100	80-100	45-75	40-65	13-35
	84-100	Sandy clay loam, sandy clay, sandy loam, clay loam, clay	ML, CL, CH, SC	A-6, A-7	0	0	100	98-100	80-100	45-75	40-65	13-35

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
GoA:												
Goldsboro-------	0-8	Loamy sand, loamy fine sand	SC-SM, SM	A-2	0	0	95-100	95-100	50-95	13-30	10-20	NP
	8-15	Loamy sand, loamy fine sand, sandy loam, fine sandy loam	SM, SC-SM	A-2	0	0	95-100	95-100	50-95	13-30	10-20	NP
	15-45	Sandy clay loam, clay loam, loam, fine sandy loam, sandy loam	SC-SM, SC, CL-ML, CL	A-6, A-4, A-2	0	0	98-100	95-100	60-100	25-55	20-37	4-18
	45-80	Sandy clay loam, sandy loam, loam, clay loam, sandy clay, clay, fine sandy loam	SC-SM, SC, CL, CH	A-6, A-7-6	0	0	95-100	90-100	65-95	36-70	25-55	18-32
GrB:												
Gritney---------	0-9	Fine sandy loam, sandy loam, loam	SC-SM, SM, SC, ML	A-2, A-4	0	0	90-100	80-100	60-95	30-90	20-30	NP-8
	9-58	Clay, sandy clay, clay loam	CH, CL, SC	A-7	0	0	95-100	90-100	80-100	45-80	45-70	22-40
	58-80	Stratified loamy sand to sandy clay loam, sandy clay loam, loam, clay loam	SM, CL, ML, SC	A-1, A-2, A-4, A-6	0	0-2	70-100	55-100	30-90	20-60	20-40	NP-25

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
GrC:												
Gritney---------	0-9	Fine sandy loam, sandy loam, loam	SC-SM, SM, ML, SC	A-2, A-4	0	0	90-100	80-100	60-95	30-90	20-30	NP-8
	9-58	Clay, sandy clay, clay loam	SC, CH, CL	A-7	0	0	95-100	90-100	80-100	45-80	45-70	22-40
	58-80	Stratified loamy sand to sandy clay loam, sandy loam, sandy clay loam, loam, clay loam	CL, ML, SC, SM	A-1, A-2, A-4, A-6	0	0-2	70-100	55-100	30-90	20-60	20-40	NP-25
JmA:												
Johnston, undrained------	0-30	Mucky loam	ML, OL, CL-ML	A-4, A-5, A-6, A-7-5	0	0	100	100	90-100	51-75	20-45	2-14
	30-34	Loamy fine sand, fine sandy loam, stratified loamy sand to sand	SP-SM, SM	A-2, A-3	0	0	100	100	50-100	5-30	15-20	NP
	34-80	Fine sandy loam, loamy fine sand, stratified sand to loamy sand	SM	A-2, A-4	0	0	100	100	50-100	25-49	15-35	NP-10

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Johnston, drained--------	0-30	Mucky loam	OL, ML, CL-ML	A-4, A-5, A-6, A-7-5	0	0	100	100	90-100	51-75	20-45	2-14
	30-34	Loamy fine sand, fine sandy loam, stratified loamy sand to sand	SP-SM, SM	A-2, A-3	0	0	100	100	50-100	5-30	15-20	NP
	34-80	Fine sandy loam, loamy fine sand, stratified sand to loamy sand	SM	A-2, A-4	0	0	100	100	50-100	25-49	15-35	NP-10
JoA: Johns-----------	0-8	Fine sandy loam, sandy loam	SM, SC-SM, SC	A-2-4, A-4	0	0	80-100	75-100	55-85	30-55	7-25	NP-8
	8-15	Fine sandy loam, sandy loam, loamy fine sand, loamy sand	SM, SC-SM, SC	A-2-4, A-4	0	0	80-100	75-100	40-85	10-55	7-25	NP-8
	15-32	Sandy loam, sandy clay loam	SC-SM, SC, CL	A-6	0	0	80-100	75-100	45-85	25-55	27-44	12-25
	32-80	Sand, coarse sand, loamy sand	SM, SW-SM, SC-SM	A-2-4	0	0	80-100	75-100	40-75	3-30	0-27	NP-10

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
KaA:												
Kalmia----------	0-8	Loamy sand, loamy fine sand	SC-SM, SM	A-4, A-2-4	0	0	95-100	90-100	65-85	25-45	7-21	NP-6
	8-12	Loamy sand, loamy fine sand, sandy loam, fine sandy loam	SC-SM, SM, SC	A-4, A-2-4	0	0	80-100	75-100	40-100	10-90	7-30	NP-10
	12-32	Sandy clay loam, sandy loam, loam, fine sandy loam	SM, SC-SM, SC, ML, CL	A-2-4, A-4, A-6, A-7-6	0	0	80-100	75-100	45-100	25-80	7-45	NP-18
	32-80	Loamy sand, fine sand, loamy fine sand, sand	SP, SP-SM, SM	A-2-4, A-4	0	0	80-100	75-100	40-85	3-45	7-21	NP-6
KnB:												
Kenansville, moderately wet-	0-8	Loamy sand, sand, fine sand, loamy fine sand	SM, SP-SM, SC-SM	A-1, A-2-4	0	0	100	95-100	45-99	10-25	0-14	NP
	8-24	Loamy sand, sand, fine sand, loamy fine sand	SC-SM, SM, SP-SM	A-1, A-2-4	0	0	100	95-100	45-99	10-25	0-14	NP
	24-36	Sandy loam, fine sandy loam, sandy clay loam	SC, SC-SM, SM	A-2-4, A-4	0	0	100	95-100	50-99	25-45	0-30	NP-10
	36-84	Sand, loamy sand, loamy fine sand	SP-SM, SM, SC-SM	A-1, A-2-4, A-3	0	0	100	95-100	40-99	5-30	0-14	NP

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
LuA:												
Lumbee, drained-	0-6	Sandy loam	SC, SC-SM, SM	A-2-4	0	0	80-100	75-100	45-70	25-40	7-25	NP-8
	6-14	Sandy loam, fine sandy loam, loam, loamy fine sand, loamy sand, silt loam	SC-SM, SM, SC, ML, CL-ML, CL	A-4, A-2-4	0	0	80-100	75-100	40-100	10-90	7-30	NP-10
	14-36	Sandy loam, fine sandy loam, loam, sandy clay loam, clay loam	SM, SC-SM, SC, ML, CL	A-2-4, A-4, A-6, A-7-6	0	0	80-100	75-100	45-100	25-80	7-45	NP-18
	36-80	Sand, fine sand, loamy sand, loamy fine sand	SC-SM, SW-SM, SM	A-2-4, A-4	0	0	80-100	75-100	40-85	3-45	7-21	NP-6
Lumbee, undrained------	0-6	Sandy loam	SC, SC-SM, SM	A-2-4	0	0	80-100	75-100	45-70	25-40	7-25	NP-8
	6-14	Sandy loam, fine sandy loam, loam, loamy fine sand, loamy sand, silt loam	SC-SM, SM, SC, ML, CL-ML, CL	A-4, A-2-4	0	0	80-100	75-100	40-100	10-90	7-30	NP-10
	14-36	Sandy loam, fine sandy loam, loam, sandy clay loam, clay loam	SM, SC-SM, SC, ML, CL	A-2-4, A-4, A-6, A-7-6	0	0	80-100	75-100	45-100	25-80	7-45	NP-18
	36-80	Sand, fine sand, loamy sand, loamy fine sand	SC-SM, SW-SM, SM	A-2-4, A-4	0	0	80-100	75-100	40-85	3-45	7-21	NP-6

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
LyA:												
Lynchburg-------	0-6	Sandy loam, fine sandy loam, loam	SM, SC-SM, ML	A-2-4, A-4, A-2	0	0	92-100	90-100	75-100	25-55	0-30	NP-4
	6-10	Sandy loam, fine sandy loam, loam, loamy sand, loamy fine sand	SM, SC-SM	A-2, A-2-4, A-4	0	0	92-100	90-100	60-100	12-40	0-25	NP-7
	10-65	Sandy clay loam, sandy loam, clay loam	SC-SM, SC, CL-ML, CL	A-2-4, A-4, A-6, A-2	0	0	92-100	90-100	70-100	25-67	15-40	NP-18
	65-80	Clay, sandy clay, sandy clay loam	SC-SM, SC, CL, CL-ML	A-2-4, A-2-6, A-4, A-6, A-2	0	0	95-100	92-100	70-100	25-73	15-40	NP-20
MaA:												
Mantachie-------	0-18	Loam, sandy loam	ML, CL-ML, CL	A-4	0	0	100	100	90-100	70-85	15-30	NP-10
	18-80	Loam, gravelly sandy loam, sandy clay loam, fine sandy loam, sandy loam	CL-ML, CL, SC-SM, SC	A-4, A-6	0	0-5	95-100	90-100	60-95	40-80	20-40	NP-15
McA:												
McColl, ponded--	0-9	Loam	CL-ML, CL, SC, SC-SM	A-4, A-6	0	0	100	95-100	75-90	45-65	20-40	5-20
	9-13	Clay loam, sandy clay, clay	SC, CL	A-4, A-6, A-7	0	0	100	95-100	80-98	36-75	25-50	8-23
	13-42	Sandy clay loam, clay loam, sandy clay	SC-SM, SC, CL-ML, CL	A-2, A-4, A-6	0	0	100	95-100	65-90	32-60	20-40	3-15
	42-80	Sandy clay loam, sandy loam, sandy clay	SC-SM, SC, SM	A-2, A-4, A-6, A-7	0	0	100	95-100	60-80	30-50	15-52	3-22

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
McColl, drained-	0-9	Loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0	100	95-100	75-90	45-65	20-40	5-20
	9-13	Clay loam, sandy clay, clay	SC, CL	A-4, A-6, A-7	0	0	100	95-100	80-98	36-75	25-50	8-23
	13-42	Sandy clay loam, clay loam, sandy clay	CL-ML, CL, SC, SC-SM	A-2, A-4, A-6	0	0	100	95-100	65-90	32-60	20-40	3-15
	42-80	Sandy clay loam, sandy loam, sandy clay	SM, SC-SM, SC	A-2, A-4, A-6, A-7	0	0	100	95-100	60-80	30-50	15-52	3-22
MxA:												
Maxton----------	0-8	Loamy sand	SP-SM, SM	A-2	0	0-3	90-100	90-100	70-95	10-25	0-25	NP-4
	8-12	Loamy sand	SM, SP-SM	A-2	0	0-3	90-100	90-100	70-95	10-25	0-25	NP-4
	12-33	Sandy clay loam, sandy loam	SC-SM, SC	A-2, A-6	0	0-3	90-100	85-100	75-90	30-49	27-44	12-25
	33-80	Sand, loamy sand	SM, SP-SM, SP	A-2, A-3	0	0-3	90-100	75-100	50-90	4-25	0-23	NP-6
NcA:												
Noboco----------	0-10	Loamy sand	SM	A-2	0	0	100	100	50-95	15-35	0-14	NP
	10-13	Loamy sand	SM	A-2	0	0	100	100	50-95	15-35	0-14	NP
	13-80	Sandy clay loam, clay loam, sandy loam	SC, CL, CL-ML, SC-SM	A-2, A-4, A-6	0	0	95-100	95-100	70-96	30-63	20-38	4-15
NcB:												
Noboco----------	0-10	Loamy sand	SM	A-2	0	0	100	100	50-95	15-35	0-14	NP
	10-13	Loamy sand	SM	A-2	0	0	100	100	50-95	15-35	0-14	NP
	13-80	Sandy clay loam, clay loam, sandy loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	95-100	95-100	70-96	30-63	20-38	4-15

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
NoA:												
Norfolk---------	0-9	Loamy sand, loamy fine sand	SM, SC-SM	A-2-4	0	0	95-100	92-100	50-95	13-30	15-20	NP
	9-14	Loamy sand, loamy fine sand, fine sandy loam, sandy loam	SM, SC-SM	A-2-4, A-2	0	0	95-100	92-100	50-95	13-30	15-20	NP
	14-70	Sandy clay loam, sandy loam, clay loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	95-100	91-100	70-96	30-63	20-38	4-15
	70-100	Sandy clay loam, clay loam, sandy clay	CL-ML, SC, ML, SC-SM, CL	A-4, A-6, A-7-6	0	0	100	98-100	65-98	36-72	25-52	4-23
NoB:												
Norfolk---------	0-9	Loamy sand, loamy fine sand	SM, SC-SM	A-2-4	0	0	95-100	92-100	50-95	13-30	15-20	NP
	9-14	Loamy sand, loamy fine sand, fine sandy loam, sandy loam	SM, SC-SM	A-2-4, A-2	0	0	95-100	92-100	50-95	13-30	15-20	NP
	14-70	Sandy clay loam, sandy loam, clay loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	95-100	91-100	70-96	30-63	20-38	4-15
	70-100	Sandy clay loam, clay loam, sandy clay	SC, SC-SM, ML, CL-ML, CL	A-4, A-6, A-7-6	0	0	100	98-100	65-98	36-72	25-52	4-23

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
OcA:												
Ocilla----------	0-10	Loamy sand, loamy fine sand	SM, SC-SM	A-2-4, A-3	0	0	100	95-100	75-100	8-35	0-14	NP
	10-28	Loamy sand, loamy fine sand	SC-SM, SM	A-2-4, A-3	0	0	100	95-100	75-100	8-35	0-14	NP
	28-46	Sandy clay loam, sandy loam, fine sandy loam	ML, SC, SM, CL	A-2, A-4, A-6	0	0	100	95-100	80-100	20-55	20-40	NP-18
	46-80	Sandy clay loam, sandy clay, sandy loam	CL, SC	A-4, A-6, A-7	0	0	100	95-100	80-100	36-60	20-45	7-20
OsA:												
Osier, undrained	0-8	Loamy sand	SP-SM	A-2, A-3	0	0	100	98-100	60-85	5-12	0-14	NP
	8-48	Sand, loamy sand, loamy fine sand	SP-SM, SM	A-2, A-3	0	0	100	95-100	65-96	5-20	0-14	NP
	48-80	Coarse sand, sand, fine sand	SP, SP-SM	A-1, A-2-4, A-3	0	0	100	90-100	40-60	2-10	0-14	NP
PaA:												
Pactolus--------	0-8	Loamy sand	SC-SM, SP-SM, SM	A-2-4, A-3	0	0	100	100	51-100	6-30	10-20	NP
	8-40	Loamy sand, sand, loamy fine sand	SC-SM, SP-SM, SM	A-2-4, A-3	0	0	100	100	51-100	6-30	10-20	NP
	40-80	Loamy sand, sand, loamy fine sand	SP-SM, SM, SC-SM	A-2-4, A-3	0	0	100	100	51-100	5-30	10-20	NP
PcA:												
Pamlico, undrained------	0-30	Muck	GP, PT		0	0	---	---	---	---	---	---
	30-80	Loamy sand, sand, loamy fine sand	SM, SC-SM	A-2-4, A-3	0	0	100	100	70-95	5-20	10-20	NP

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Johnston, undrained------	0-30	Mucky loam	CL-ML, ML, OL	A-4, A-5, A-6, A-7-5	0	0	100	100	90-100	51-75	20-45	2-14
	30-34	Loamy fine sand, fine sandy loam, stratified loamy sand to sand	SM, SP-SM	A-2, A-3	0	0	100	100	50-100	5-30	15-20	NP
	34-80	Fine sandy loam, loamy fine sand, stratified sand to loamy sand	SM	A-2, A-4	0	0	100	100	50-100	25-49	15-35	NP-10
PnA:												
Pantego, drained	0-10	Loam, fine sandy loam, sandy loam	SM, ML	A-2, A-4	0	0	100	95-100	60-95	25-75	20-35	NP-10
	10-18	Loam, fine sandy loam, sandy loam	SM, ML	A-2, A-4	0	0	100	95-100	60-95	25-75	20-35	NP-10
	18-27	Sandy clay loam, sandy loam, clay loam	SC-SM, SC, CL, CL-ML	A-2, A-4, A-6	0	0	100	95-100	65-100	30-80	20-40	4-16
	27-80	Sandy clay loam, sandy clay, clay loam	CL, SC	A-6, A-7	0	0	100	95-100	80-100	36-80	25-49	11-24
Pantego, undrained------	0-18	Loam, fine sandy loam, sandy loam	ML, SM	A-2, A-4	0	0	100	95-100	60-95	25-75	20-35	NP-10
	18-27	Sandy clay loam, sandy loam, clay loam	CL, SC, SC-SM, CL-ML	A-2, A-4, A-6	0	0	100	95-100	65-100	30-80	20-40	4-16
	27-80	Sandy clay loam, sandy clay, clay loam	SC, CL	A-6, A-7	0	0	100	95-100	80-100	36-80	25-49	11-24

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
PoA:												
Pelion----------	0-5	Loamy sand, sand	SM, SP-SM	A-2, A-3	0	0	98-100	95-100	45-85	5-30	0-26	NP-6
	5-10	Loamy sand, sand	SP-SM, SM	A-2, A-3	0	0	98-100	95-100	45-85	5-30	0-26	NP-6
	10-22	Sandy clay loam, sandy loam, clay loam	CL, SC, SC-SM	A-2, A-6	0	0	95-100	92-100	50-90	25-55	27-44	12-25
	22-39	Sandy clay loam, sandy loam, clay loam, sandy clay	CL, SC, SC-SM	A-2, A-6, A-7	0	0	98-100	92-100	50-90	25-60	27-57	12-36
	39-80	Sandy clay loam, sandy loam	SC-SM, SC	A-2, A-6	0	0	98-100	92-100	50-90	18-60	20-49	6-28
PoB:												
Pelion----------	0-5	Loamy sand, sand	SM, SP-SM	A-2, A-3	0	0	98-100	95-100	45-85	5-30	0-26	NP-6
	5-10	Loamy sand, sand	SM, SP-SM	A-2, A-3	0	0	98-100	95-100	45-85	5-30	0-26	NP-6
	10-22	Sandy clay loam, sandy loam, clay loam	SC, SC-SM, CL	A-2, A-6	0	0	95-100	92-100	50-90	25-55	27-44	12-25
	22-39	Sandy clay loam, sandy loam, clay loam, sandy clay	SC-SM, CL, SC	A-2, A-6, A-7	0	0	98-100	92-100	50-90	25-60	27-57	12-36
	39-80	Sandy clay loam, sandy loam	SC-SM, SC	A-2, A-6	0	0	98-100	92-100	50-90	18-60	20-49	6-28

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
PoC:												
Pelion----------	0-5	Loamy sand, sand	SM, SP-SM	A-2, A-3	0	0	98-100	95-100	45-85	5-30	0-26	NP-6
	5-10	Loamy sand, sand	SM, SP-SM	A-2, A-3	0	0	98-100	95-100	45-85	5-30	0-26	NP-6
	10-22	Sandy clay loam, sandy loam, clay loam	CL, SC, SC-SM	A-2, A-6	0	0	95-100	92-100	50-90	25-55	27-44	12-25
	22-39	Sandy clay loam, sandy loam, clay loam, sandy clay	SC-SM, CL, SC	A-2, A-6, A-7	0	0	98-100	92-100	50-90	25-60	27-57	12-36
	39-80	Sandy clay loam, sandy loam	SC, SC-SM	A-2, A-6	0	0	98-100	92-100	50-90	18-60	20-49	6-28
PoD:												
Pelion----------	0-5	Loamy sand, sand	SM, SP-SM	A-2, A-3	0	0	98-100	95-100	45-85	5-30	0-26	NP-6
	5-10	Loamy sand, sand	SP-SM, SM	A-2, A-3	0	0	98-100	95-100	45-85	5-30	0-26	NP-6
	10-22	Sandy clay loam, sandy loam, clay loam	CL, SC, SC-SM	A-2, A-6	0	0	95-100	92-100	50-90	25-55	27-44	12-25
	22-39	Sandy clay loam, sandy loam, clay loam, sandy clay	CL, SC, SC-SM	A-2, A-6, A-7	0	0	98-100	92-100	50-90	25-60	27-57	12-36
	39-80	Sandy clay loam, sandy loam	SC-SM, SC	A-2, A-6	0	0	98-100	92-100	50-90	18-60	20-49	6-28

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
PuA:												
Plummer, undrained------	0-9	Loamy sand, sand	SM	A-2-4	0	0	100	100	75-96	13-26	0-14	NP
	9-50	Loamy sand, sand	SM	A-2-4	0	0	100	100	75-96	13-26	0-14	NP
	50-80	Sandy loam, sandy clay loam, fine sandy loam	SM, SC-SM, SC	A-2-4, A-4	0	0	100	97-100	76-96	20-48	0-30	NP-10
Osier, undrained	0-8	Loamy sand	SP-SM	A-2, A-3	0	0	100	98-100	60-85	5-12	0-14	NP
	8-48	Sand, loamy sand, loamy fine sand	SM, SP-SM	A-2, A-3	0	0	100	95-100	65-96	5-20	0-14	NP
	48-80	Coarse sand, sand, fine sand	SP-SM, SP	A-1, A-2-4, A-3	0	0	100	90-100	40-60	2-10	0-14	NP
PxA:												
Paxville, ponded	0-15	Loam, fine sandy loam, loamy fine sand	SC-SM, SM, ML	A-2, A-4	0	0	100	100	80-98	30-60	0-35	NP-7
	15-40	Sandy clay loam, sandy loam, loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	100	98-100	60-98	30-60	21-40	5-15
	40-48	Sandy loam, loamy sand, fine sandy loam	SM, SP-SM	A-2-4, A-3	0	0	100	98-100	60-98	5-35	0-30	NP-4
	48-99	Sand, loamy sand, fine sand	SM, SC-SM	A-3, A-1, A-2-4	0	0	95-100	90-100	45-65	5-25	0-14	NP

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Paxville, drained--------	0-15	Loam, fine sandy loam, loamy fine sand	SC-SM, SM, ML	A-2, A-4	0	0	100	100	80-98	30-60	0-35	NP-7
	15-40	Sandy clay loam, sandy loam, loam	CL, CL-ML, SC, SC-SM	A-2, A-4, A-6	0	0	100	98-100	60-98	30-60	21-40	5-15
	40-48	Sandy loam, loamy sand, fine sandy loam	SP-SM, SM	A-2-4, A-3	0	0	100	98-100	60-98	5-35	0-30	NP-4
	48-99	Sand, loamy sand, fine sand	SM, SC-SM	A-3, A-1, A-2-4	0	0	95-100	90-100	45-65	5-25	0-14	NP
RaA: Rains, drained--	0-7	Fine sandy loam, sandy loam, very fine sandy loam	SC, SM, SC-SM	A-4, A-2-4	0	0	100	95-100	50-85	25-56	0-35	NP-10
	7-12	Sand, loamy sand, fine sandy loam, loam	SM, CL-ML, CL, ML	A-2-4, A-4	0	0	100	95-100	50-85	25-56	0-35	NP-10
	12-20	Sandy loam, loam, sandy clay loam, clay loam	SC-SM, SC, CL-ML, CL	A-2-4, A-6	0	0	100	95-100	55-98	30-70	18-40	5-20
	20-62	Sandy clay loam, clay loam, sandy clay	CL, SC	A-7-6, A-6	0	0	100	95-100	60-98	36-72	18-45	8-28
	62-85	Sandy loam, fine sandy loam, sandy clay loam, sandy clay	CL, SC	A-2-4, A-6	0	0	100	95-100	60-95	30-60	15-40	5-18

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
Rains, undrained	0-7	Fine sandy loam, sandy loam, very fine sandy loam	SM, SC, SC-SM	A-4, A-2-4	0	0	100	95-100	50-85	25-56	0-35	NP-10
	7-12	Sand, loamy sand, fine sandy loam, sandy loam, loam	SM, CL-ML, ML, CL	A-2-4, A-4	0	0	100	95-100	50-85	25-56	0-35	NP-10
	12-20	Sandy loam, loam, sandy clay loam, clay loam	SC-SM, SC, CL-ML, CL	A-2-4, A-6	0	0	100	95-100	55-98	30-70	18-40	5-20
	20-62	Sandy clay loam, clay loam, sandy clay	CL, SC	A-7-6, A-6	0	0	100	95-100	60-98	36-72	18-45	8-28
	62-85	Sandy loam, fine sandy loam, sandy clay loam, sandy clay	CL, SC	A-2-4, A-6	0	0	100	95-100	60-95	30-60	15-40	5-18
RuA:												
Rutlege, undrained------	0-15	Loamy sand	SM, SP-SM	A-2, A-3	0	0	95-100	95-100	50-80	5-35	0-25	NP
	15-80	Sand, loamy sand, loamy fine sand	SM, SP, SP-SM	A-2, A-3	0	0	95-100	95-100	50-80	2-25	0-20	NP
Rutlege, drained	0-15	Loamy sand	SP-SM, SM	A-2, A-3	0	0	95-100	95-100	50-80	5-35	0-25	NP
	15-80	Sand, loamy sand, loamy fine sand	SP-SM, SP, SM	A-2, A-3	0	0	95-100	95-100	50-80	2-25	0-20	NP

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
ThA:												
Thursa----------	0-10	Sand, sandy loam, loamy sand	SM	A-2	0	0	80-100	75-100	40-75	3-40	0-32	NP-13
	10-35	Sandy clay loam, clay loam	CL, SC	A-6, A-7	0	0	80-100	75-100	60-100	25-80	29-44	13-25
	35-50	Sandy clay loam, sandy clay, clay loam, clay	CL, SC	A-6, A-7	0	0	80-100	75-100	60-100	25-90	29-66	13-43
	50-80	Sandy clay, clay loam, sandy clay loam, clay	CL, SC	A-6, A-7	0	0	80-100	75-100	60-100	25-90	29-66	13-43
ThB:												
Thursa----------	0-10	Sand, sandy loam, loamy sand	SM	A-2	0	0	80-100	75-100	40-75	3-40	0-32	NP-13
	10-35	Sandy clay loam, clay loam	SC, CL	A-6, A-7	0	0	80-100	75-100	60-100	25-80	29-44	13-25
	35-50	Sandy clay loam, sandy clay, clay loam, clay	CL, SC	A-6, A-7	0	0	80-100	75-100	60-100	25-90	29-66	13-43
	50-80	Sandy clay, clay, clay loam, sandy clay loam	SC, CL	A-6, A-7	0	0	80-100	75-100	60-100	25-90	29-66	13-43

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
UcC:												
Uchee-----------	0-6	Loamy sand, loamy coarse sand	SM, SC-SM	A-1-b, A-2-4	0	0	90-100	80-100	40-70	15-30	0-14	NP
	6-26	Loamy sand, loamy coarse sand	SM, SC-SM	A-1-b, A-2-4	0	0	90-100	80-100	40-70	15-30	0-14	NP
	26-47	Sandy clay loam, sandy clay, clay	CH, CL, SC	A-7	0	0	90-100	80-100	65-90	40-70	41-70	18-38
	47-80	Sandy clay loam, sandy loam, sandy clay	CH, CL, SC	A-2-6, A-6, A-7	0	0	85-100	80-100	50-80	30-65	35-65	15-35
Ud:												
Udorthents, loamy----------	0-80	Sandy clay loam, fine sandy loam, sandy loam, loamy sand, sand	SM, SC-SM	A-2-4, A-4, A-6	0	0	85-100	85-100	70-90	23-45	20-45	NP-13
VaB:												
Vaucluse--------	0-6	Loamy sand	SM	A-2-4, A-3	0	0-5	90-100	90-100	50-75	8-30	10-14	NP
	6-15	Loamy sand	SM	A-2-4, A-3	0	0-5	90-100	90-100	50-75	8-30	10-14	NP
	15-29	Sandy clay loam, sandy loam	SC, SC-SM	A-2, A-4, A-6	0	0-5	90-100	90-100	51-75	25-50	20-40	5-18
	29-58	Sandy clay loam, sandy loam, sandy clay	SC-SM, SM, SC	A-2-4, A-4, A-6	0	0-5	95-100	92-100	51-80	20-50	10-40	NP-20
	58-80	Sandy loam, sandy clay loam, loamy sand	SC, SC-SM, SM	A-2-4, A-4, A-6	0	0-2	95-100	95-100	51-90	15-50	10-30	NP-12

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
VaC:												
Vaucluse--------	0-6	Loamy sand	SM	A-2-4, A-3	0	0-5	90-100	90-100	50-75	8-30	10-14	NP
	6-15	Loamy sand	SM	A-2-4, A-3	0	0-5	90-100	90-100	50-75	8-30	10-14	NP
	15-29	Sandy clay loam, sandy loam	SC, SC-SM	A-2, A-4, A-6	0	0-5	90-100	90-100	51-75	25-50	20-40	5-18
	29-58	Sandy clay loam, sandy loam, sandy clay	SM, SC-SM, SC	A-2-4, A-4, A-6	0	0-5	95-100	92-100	51-80	20-50	10-40	NP-20
	58-80	Sandy loam, sandy clay loam, loamy sand	SM, SC-SM, SC	A-2-4, A-4, A-6	0	0-2	95-100	95-100	51-90	15-50	10-30	NP-12
WaB:												
Wagram----------	0-8	Loamy sand, loamy fine sand	SM, SC-SM	A-2-4, A-3	0	0	100	98-100	50-85	8-35	10-20	NP
	8-24	Loamy sand, loamy fine sand	SM, SC-SM	A-2-4, A-3	0	0	100	98-100	50-85	8-35	10-20	NP
	24-83	Sandy clay loam, sandy loam	SC	A-2, A-4, A-6, A-7	0	0	100	98-100	60-95	31-49	21-41	8-18
WcB:												
Wakulla---------	0-7	Sand, fine sand, coarse sand	SP-SM	A-3	0	0	100	100	55-90	4-10	10-14	NP
	7-24	Sand, fine sand, coarse sand	SP-SM	A-3	0	0	100	100	55-90	4-10	10-14	NP
	24-42	Loamy sand, loamy fine sand, loamy coarse sand	SM, SP-SM, SC-SM	A-2-4	0	0	100	100	55-85	10-25	15-20	NP
	42-85	Sand, fine sand, coarse sand	SM	A-2, A-3	0	0	100	100	50-70	4-15	10-14	NP

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Candor----------	0-8	Sand	SP-SM, SM	A-2, A-2-4, A-3	0	0-2	98-100	96-100	55-90	5-15	0-14	NP
	8-26	Sand	SP-SM, SM	A-3, A-2, A-2-4	0	0-2	98-100	96-100	55-90	5-15	0-14	NP
	26-38	Loamy sand	SP-SM, SM	A-2-4, A-2	0	0-2	98-100	96-100	63-90	10-25	0-14	NP
	38-62	Sand	SP-SM, SM	A-2, A-3	0	0-7	90-100	90-100	55-90	5-15	0-14	NP
	62-80	Sandy clay loam	SM, SC-SM, SC	A-2, A-4, A-6, A-7	0	0-7	90-100	90-100	55-90	25-49	0-45	NP-25
WkB:												
Wakulla, moderately wet-	0-7	Sand, fine sand, coarse sand	SP-SM	A-3	0	0	100	100	55-90	4-10	10-14	NP
	7-24	Sand, fine sand, coarse sand	SP-SM	A-3	0	0	100	100	55-90	4-10	10-14	NP
	24-42	Loamy sand, loamy fine sand, loamy coarse sand	SC-SM, SP-SM, SM	A-2-4	0	0	100	100	55-85	10-25	15-20	NP
	42-85	Sand, fine sand, coarse sand	SM	A-2, A-3	0	0	100	100	50-70	4-15	10-14	NP
Candor, moderately wet-	0-8	Sand	SM, SP-SM	A-2, A-2-4, A-3	0	0-2	98-100	96-100	55-90	5-15	0-14	NP
	8-26	Sand	SM, SP-SM	A-3, A-2, A-2-4	0	0-2	98-100	96-100	55-90	5-15	0-14	NP
	26-38	Loamy sand	SM, SP-SM	A-2-4, A-2	0	0-2	98-100	96-100	63-90	10-25	0-14	NP
	38-62	Sand	SM, SP-SM	A-2, A-3	0	0-7	90-100	90-100	55-90	5-15	0-14	NP
	62-80	Sandy clay loam	SC, SC-SM, SM	A-2, A-4, A-6, A-7	0	0-7	90-100	90-100	55-90	25-49	0-45	NP-25

Engineering Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
WuB:												
Wakulla---------	0-7	Sand, fine sand, coarse sand	SP-SM	A-3	0	0	100	100	55-90	4-10	10-14	NP
	7-24	Sand, fine sand, coarse sand	SP-SM	A-3	0	0	100	100	55-90	4-10	10-14	NP
	24-42	Loamy sand, loamy fine sand, loamy coarse sand	SP-SM, SC-SM, SM	A-2-4	0	0	100	100	55-85	10-25	15-20	NP
	42-85	Sand, fine sand, coarse sand	SM	A-2, A-3	0	0	100	100	50-70	4-15	10-14	NP
Rimini----------	0-4	Sand, fine sand, coarse sand	SP-SM, SW, SP	A-3	0	0	100	98-100	60-98	2-5	0-14	NP
	4-58	Sand, fine sand, coarse sand	SW, SP-SM, SP	A-3	0	0	100	98-100	60-98	2-5	0-14	NP
	58-80	Sand, fine sand	SW-SM, SP-SM, SP	A-3	0	0	100	98-100	75-100	3-10	0-14	NP
	80-88	Sand, fine sand	SW, SP-SM, SP	A-3	0	0	100	98-100	75-100	2-5	0-14	NP

Physical Soil Properties

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer. Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodibility group	Wind erodibility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
AeB, AeC:														
Ailey----------------	0-5	---	---	5-10	1.35-1.45	42.00-141.00	0.03-0.05	0.0-2.9	0.0-1.0	.20	.20	3	2	134
	5-24	---	---	5-10	1.35-1.45	42.00-141.00	0.03-0.05	0.0-2.9	0.0-1.0	.20	.20			
	24-36	---	---	15-35	1.55-1.70	4.00-14.00	0.09-0.12	0.0-2.9	0.0-0.2	.24	.24			
	36-50	---	---	18-35	1.70-1.80	0.42-1.40	0.06-0.10	0.0-2.9	0.0-0.2	.24	.24			
	50-80	---	---	15-30	1.80-1.95	0.42-1.40	0.04-0.08	0.0-2.9	0.0-0.2	.20	.20			
AuB:														
Autryville-----------	0-9	---	---	2-10	1.60-1.70	42.00-141.00	0.04-0.09	0.0-2.9	0.5-1.0	.20	.20	5	2	134
	9-26	---	---	2-10	1.60-1.70	42.00-141.00	0.04-0.09	0.0-2.9	0.2-0.8	.20	.20			
	26-46	---	---	10-25	1.40-1.60	14.00-42.00	0.08-0.13	0.0-2.9	0.0-0.5	.20	.20			
	46-58	---	---	2-8	1.60-1.70	42.00-141.00	0.03-0.08	0.0-2.9	0.0-0.5	.20	.20			
	58-85	---	---	10-35	1.40-1.60	4.00-14.00	0.10-0.15	0.0-2.9	0.0-0.5	.24	.24			
BaA:														
Bibb, undrained------	0-6	---	---	2-18	1.40-1.65	14.00-42.00	0.10-0.15	0.0-2.9	1.0-3.0	.32	.32	5	2	134
	6-60	---	---	2-18	1.40-1.65	14.00-42.00	0.10-0.15	0.0-2.9	1.0-3.0	.43	.43			
	60-80	---	---	2-18	1.45-1.75	14.00-42.00	0.10-0.20	0.0-2.9	0.5-1.0	.24	.24			
Johnston, undrained--	0-30	---	---	7-18	1.25-1.45	14.00-42.00	0.20-0.26	0.0-2.9	8.0-15	.10	.10	5	8	0
	30-34	---	---	2-12	1.55-1.65	42.00-141.00	0.02-0.07	0.0-2.9	0.5-3.0	.24	.24			
	34-80	---	---	5-20	1.45-1.65	42.00-141.00	0.06-0.12	0.0-2.9	0.0-2.0	.24	.24			
BlC:														
Blanton--------------	0-7	---	---	1-7	1.30-1.60	42.00-141.00	0.03-0.07	0.0-2.9	0.5-1.0	.10	.10	5	1	220
	7-52	---	---	1-7	1.30-1.60	42.00-141.00	0.03-0.07	0.0-2.9	0.0-0.8	.15	.15			
	52-67	---	---	10-18	1.50-1.65	14.00-42.00	0.10-0.15	0.0-2.9	0.0-0.5	.28	.28			
	67-85	---	---	12-40	1.60-1.70	1.40-14.00	0.10-0.15	0.0-2.9	0.0-0.5	.24	.24			
BrB:														
Bragg----------------	0-6	---	---	5-15	1.30-1.70	42.00-141.00	0.05-0.11	0.0-2.9	0.5-2.0	.24	.24	5	3	86
	6-30	---	---	18-35	1.40-1.70	1.40-4.00	0.10-0.15	0.0-2.9	0.0-1.0	.24	.24			
	30-80	---	---	15-45	1.30-1.60	1.40-4.00	0.10-0.15	0.0-2.9	0.0-1.0	.24	.24			
CaC:														
Candor---------------	0-8	---	---	1-4	1.60-1.70	42.00-141.00	0.02-0.06	0.0-2.9	0.5-1.0	.10	.10	5	1	220
	8-26	---	---	1-4	1.60-1.70	42.00-141.00	0.02-0.06	0.0-2.9	0.2-0.5	.10	.10			
	26-38	---	---	6-12	1.55-1.70	42.00-141.00	0.06-0.10	0.0-2.9	0.0-0.5	.20	.20			
	38-62	---	---	1-4	1.60-1.70	42.00-141.00	0.02-0.05	0.0-2.9	0.0-0.5	.10	.10			
	62-80	---	---	10-35	1.35-1.60	4.00-14.00	0.12-0.16	0.0-2.9	0.0-0.5	.24	.24			

Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
Wakulla---------------	0-7	---	---	2-8	1.45-1.60	42.00-141.00	0.00-0.05	0.0-2.9	0.5-1.0	.10	.10	5	1	220
	7-24	---	---	2-8	1.45-1.60	42.00-141.00	0.00-0.05	0.0-2.9	0.0-0.5	.10	.10			
	24-42	---	---	5-12	1.45-1.60	42.00-141.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.17			
	42-85	---	---	2-8	1.45-1.60	42.00-141.00	0.00-0.05	0.0-2.9	0.0-0.5	.10	.10			
CoA:														
Coxville, drained----	0-9	---	---	7-27	1.35-1.65	4.00-14.00	0.14-0.19	0.0-2.9	1.0-2.0	.24	.24	5	5	56
	9-11	---	---	7-27	1.35-1.65	4.00-14.00	0.14-0.19	0.0-2.9	0.5-1.0	.32	.32			
	11-72	---	---	27-60	1.25-1.45	1.40-4.00	0.08-0.16	0.0-2.9	0.0-0.5	.24	.24			
	72-80	---	---	0-55	1.30-1.70	4.00-14.00	0.06-0.19	0.0-2.9	0.0-0.5	.32	.32			
Coxville, undrained--	0-9	---	---	7-27	1.35-1.65	4.00-14.00	0.14-0.19	0.0-2.9	1.0-2.0	.24	.24	5	5	56
	9-11	---	---	7-27	1.35-1.65	4.00-14.00	0.14-0.19	0.0-2.9	0.5-1.0	.32	.32			
	11-72	---	---	27-60	1.25-1.45	1.40-4.00	0.08-0.16	0.0-2.9	0.0-0.5	.24	.24			
	72-80	---	---	0-55	1.30-1.70	4.00-14.00	0.06-0.19	0.0-2.9	0.0-0.5	.32	.32			
DbA:														
Dunbar, drained------	0-8	---	---	5-27	1.45-1.65	14.00-42.00	0.10-0.15	0.0-2.9	2.0-4.0	.24	.24	5	3	86
	8-14	---	---	18-35	1.35-1.50	1.40-4.00	0.14-0.19	0.0-2.9	0.0-1.0	.37	.37			
	14-62	---	---	30-55	1.25-1.45	1.40-4.00	0.13-0.18	3.0-5.9	0.0-0.5	.15	.15			
	62-92	---	---	0-55	1.35-1.60	1.40-141.00	0.05-0.19	0.0-2.9	0.0-0.5	.20	.20			
Dunbar, undrained----	0-8	---	---	5-27	1.45-1.65	14.00-42.00	0.10-0.15	0.0-2.9	2.0-4.0	.24	.24	5	3	86
	8-14	---	---	18-35	1.35-1.50	1.40-4.00	0.14-0.19	0.0-2.9	0.0-1.0	.37	.37			
	14-62	---	---	30-55	1.25-1.45	1.40-4.00	0.13-0.18	3.0-5.9	0.0-0.5	.15	.15			
	62-92	---	---	0-55	1.35-1.60	1.40-141.00	0.05-0.19	0.0-2.9	0.0-0.5	.20	.20			
DpA:														
Duplin---------------	0-8	---	---	4-18	1.45-1.65	14.00-42.00	0.10-0.15	0.0-2.9	0.5-2.0	.28	.28	5	3	86
	8-84	---	---	35-60	1.25-1.40	1.40-4.00	0.13-0.18	3.0-5.9	0.0-0.5	.10	.10			
	84-100	---	---	18-60	1.25-1.40	1.40-4.00	0.13-0.18	3.0-5.9	0.0-0.5	.10	.10			
GoA:														
Goldsboro------------	0-8	---	---	2-8	1.40-1.60	14.00-42.00	0.10-0.15	0.0-2.9	0.5-2.0	.37	.37	5	2	134
	8-15	---	---	2-8	1.55-1.75	42.00-141.00	0.06-0.11	0.0-2.9	0.0-0.5	.24	.24			
	15-45	---	---	18-30	1.30-1.50	4.00-14.00	0.11-0.17	0.0-2.9	0.0-0.5	.20	.20			
	45-80	---	---	20-34	1.30-1.40	4.00-14.00	0.11-0.20	0.0-2.9	0.0-0.5	.20	.20			
GrB, Grc:														
Gritney--------------	0-9	---	---	10-25	1.30-1.50	14.00-42.00	0.08-0.12	0.0-2.9	0.5-2.0	.28	.28	4	3	86
	9-58	---	---	35-60	1.30-1.50	0.42-1.40	0.10-0.17	3.0-5.9	0.0-0.5	.24	.24			
	58-80	---	---	10-35	1.30-1.50	0.01-42.00	0.06-0.12	0.0-2.9	0.0-0.1	.20	.28			

Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
JmA:														
Johnston, undrained--	0-30	---	---	7-18	1.25-1.45	14.00-42.00	0.20-0.26	0.0-2.9	8.0-15	.10	.10	5	8	0
	30-34	---	---	2-12	1.55-1.65	42.00-141.00	0.02-0.07	0.0-2.9	0.5-3.0	.24	.24			
	34-80	---	---	5-20	1.45-1.65	42.00-141.00	0.06-0.12	0.0-2.9	0.0-2.0	.24	.24			
Johnston, drained----	0-30	---	---	7-18	1.25-1.45	14.00-42.00	0.20-0.26	0.0-2.9	8.0-15	.10	.10	5	5	56
	30-34	---	---	2-12	1.55-1.65	42.00-141.00	0.02-0.07	0.0-2.9	0.5-3.0	.24	.24			
	34-80	---	---	5-20	1.45-1.65	42.00-141.00	0.06-0.12	0.0-2.9	0.0-2.0	.24	.24			
JoA:														
Johns----------------	0-8	---	---	5-20	1.40-1.50	4.00-42.00	0.12-0.16	0.0-2.9	1.0-2.0	.32	.32	4	3	86
	8-15	---	---	0-20	1.40-1.55	4.00-141.00	0.08-0.16	0.0-2.9	0.0-0.5	.24	.24			
	15-32	---	---	18-35	1.35-1.50	4.00-14.00	0.11-0.17	0.0-2.9	0.0-0.5	.20	.20			
	32-80	---	---	0-15	1.45-1.60	42.00-141.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.17			
KaA:														
Kalmia---------------	0-8	---	---	0-15	1.45-1.60	42.00-141.00	0.08-0.14	0.0-2.9	1.0-2.0	.10	.10	4	2	134
	8-12	---	---	0-27	1.35-1.55	4.00-141.00	0.08-0.22	0.0-2.9	0.0-0.5	.24	.24			
	12-32	---	---	5-40	1.30-1.50	4.00-14.00	0.11-0.13	0.0-2.9	0.0-0.5	.15	.15			
	32-80	---	---	0-15	1.45-1.60	42.00-141.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.17			
KnB:														
Kenansville, moderately wet------	0-8	---	---	3-10	1.50-1.70	42.00-141.00	0.04-0.10	0.0-2.9	0.5-2.0	.20	.20	4	2	134
	8-24	---	---	3-10	1.50-1.70	42.00-141.00	0.04-0.10	0.0-2.9	0.0-1.0	.20	.20			
	24-36	---	---	5-18	1.30-1.50	4.00-42.00	0.10-0.16	0.0-2.9	0.0-0.2	.28	.28			
	36-84	---	---	1-10	1.50-1.70	42.00-141.00	0.00-0.05	0.0-2.9	0.0-0.2	.10	.10			
LuA:														
Lumbee, drained------	0-6	---	---	5-20	1.40-1.50	4.00-42.00	0.12-0.14	0.0-2.9	1.0-2.0	.24	.24	5	3	86
	6-14	---	---	5-20	1.35-1.55	4.00-141.00	0.08-0.22	0.0-2.9	0.0-0.5	.28	.28			
	14-36	---	---	5-40	1.30-1.50	4.00-14.00	0.11-0.13	0.0-2.9	0.0-0.5	.15	.15			
	36-80	---	---	0-10	1.45-1.60	42.00-141.00	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
Lumbee, undrained----	0-6	---	---	5-20	1.40-1.50	4.00-42.00	0.12-0.14	0.0-2.9	1.0-2.0	.24	.24	5	3	86
	6-14	---	---	5-20	1.35-1.55	4.00-141.00	0.08-0.22	0.0-2.9	0.0-0.5	.28	.28			
	14-36	---	---	5-40	1.30-1.50	4.00-14.00	0.11-0.13	0.0-2.9	0.0-0.5	.15	.15			
	36-80	---	---	0-10	1.45-1.60	42.00-141.00	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
LyA:														
Lynchburg------------	0-6	---	---	5-20	1.40-1.50	4.00-42.00	0.12-0.16	0.0-2.9	1.0-6.0	.28	.28	5	3	86
	6-10	---	---	2-10	1.35-1.60	4.00-141.00	0.05-0.19	0.0-2.9	0.0-0.5	.28	.28			
	10-65	---	---	18-35	1.30-1.50	1.40-14.00	0.11-0.13	0.0-2.9	0.0-0.5	.20	.20			
	65-80	---	---	20-50	1.25-1.50	1.40-14.00	0.08-0.17	0.0-2.9	0.0-0.5	.32	.32			

Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
MaA:														
Mantachie------------	0-18	---	---	10-20	1.40-1.50	4.23-14.11	0.16-0.20	0.0-2.9	1.0-3.0	.37	.37	5	5	56
	18-80	---	---	8-34	1.50-1.60	4.23-14.11	0.14-0.20	0.0-2.9	0.5-1.0	.28	.28			
McA:														
McColl, ponded-------	0-9	---	---	15-35	1.20-1.50	4.00-14.00	0.12-0.16	0.0-2.9	1.0-8.0	.24	.24	2	8	0
	9-13	---	---	35-60	1.30-1.50	1.40-4.00	0.13-0.17	0.0-2.9	0.0-0.5	.24	.24			
	13-42	---	---	25-45	1.75-1.95	0.42-1.40	0.07-0.11	0.0-2.9	0.0-0.5	.20	.20			
	42-80	---	---	15-40	1.50-1.70	1.40-14.00	0.08-0.12	0.0-2.9	0.0-0.5	.28	.28			
McColl, drained------	0-9	---	---	15-35	1.20-1.50	4.00-14.00	0.12-0.16	0.0-2.9	1.0-8.0	.24	.24	2	6	48
	9-13	---	---	35-60	1.30-1.50	1.40-4.00	0.13-0.17	0.0-2.9	0.0-0.5	.24	.24			
	13-42	---	---	25-45	1.75-1.95	0.42-1.40	0.07-0.11	0.0-2.9	0.0-0.5	.20	.20			
	42-80	---	---	15-40	1.50-1.70	1.40-14.00	0.08-0.12	0.0-2.9	0.0-0.5	.28	.28			
MxA:														
Maxton---------------	0-8	---	---	0-8	1.60-1.75	14.00-42.00	0.06-0.10	0.0-2.9	0.5-2.0	.28	.28	4	2	134
	8-12	---	---	0-8	1.60-1.75	14.00-42.00	0.06-0.10	0.0-2.9	0.0-1.0	.28	.28			
	12-33	---	---	18-35	1.40-1.60	4.00-14.00	0.13-0.18	0.0-2.9	0.0-0.5	.20	.20			
	33-80	---	---	0-10	1.60-1.75	42.00-141.00	0.03-0.06	0.0-2.9	0.0-0.5	.10	.10			
NcA, NcB:														
Noboco---------------	0-10	---	---	5-15	1.30-1.70	42.00-141.00	0.05-0.11	0.0-2.9	0.5-2.0	.15	.15	5	2	134
	10-13	---	---	5-15	1.30-1.70	42.00-141.00	0.05-0.11	0.0-2.9	0.0-1.0	.15	.15			
	13-80	---	---	18-35	1.45-1.75	4.00-14.00	0.11-0.14	0.0-2.9	0.0-0.5	.20	.20			
NoA, NoB:														
Norfolk--------------	0-9	---	---	2-8	1.55-1.70	42.00-141.00	0.06-0.11	0.0-2.9	0.5-2.0	.24	.24	5	2	134
	9-14	---	---	2-10	1.55-1.70	42.00-141.00	0.06-0.11	0.0-2.9	0.0-0.8	.20	.20			
	14-70	---	---	18-35	1.30-1.65	4.00-14.00	0.10-0.18	0.0-2.9	0.0-0.5	.20	.20			
	70-100	---	---	20-43	1.20-1.65	4.00-14.00	0.12-0.18	0.0-2.9	0.0-0.5	.17	.17			
OcA:														
Ocilla---------------	0-10	---	---	4-10	1.45-1.65	14.00-141.00	0.05-0.08	0.0-2.9	1.0-2.0	.20	.20	5	2	134
	10-28	---	---	4-10	1.45-1.65	14.00-141.00	0.05-0.08	0.0-2.9	0.0-1.0	.28	.28			
	28-46	---	---	15-35	1.55-1.70	4.00-14.00	0.09-0.12	0.0-2.9	0.0-0.5	.24	.24			
	46-80	---	---	15-40	1.55-1.70	1.40-14.00	0.09-0.12	0.0-2.9	0.0-0.5	.24	.24			
OsA:														
Osier, undrained-----	0-8	---	---	1-10	1.35-1.60	42.00-141.00	0.03-0.10	0.0-2.9	2.0-5.0	.02	.02	5	2	134
	8-48	---	---	1-10	1.40-1.60	42.00-141.00	0.03-0.10	0.0-2.9	0.2-0.8	.10	.10			
	48-80	---	---	2-5	1.40-1.60	141.00-141.00	0.02-0.05	0.0-2.9	0.2-0.8	.10	.10			

Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
PaA:														
Pactolus-------------	0-8	---	---	2-12	1.60-1.75	42.00-141.00	0.05-0.10	0.0-2.9	0.5-2.0	.10	.10	5	2	134
	8-40	---	---	2-12	1.60-1.75	42.00-141.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.17			
	40-80	---	---	2-12	1.60-1.75	42.00-141.00	0.03-0.07	0.0-2.9	0.0-0.5	.10	.10			
PcA:														
Pamlico, undrained---	0-30	---	---	0-0	0.20-0.65	4.00-42.00	0.24-0.40	0.0-0.0	20-80	---	---	2	8	0
	30-80	---	---	5-10	1.60-1.75	42.00-141.00	0.10-0.20	0.0-2.9	0.5-5.0	.10	.10			
Johnston, undrained--	0-30	---	---	7-18	1.25-1.45	14.00-42.00	0.20-0.26	0.0-2.9	8.0-15	.10	.10	5	8	0
	30-34	---	---	2-12	1.55-1.65	42.00-141.00	0.02-0.07	0.0-2.9	0.5-3.0	.24	.24			
	34-80	---	---	5-20	1.45-1.65	42.00-141.00	0.06-0.12	0.0-2.9	0.0-2.0	.24	.24			
PnA:														
Pantego, drained-----	0-10	---	---	5-15	1.40-1.60	14.00-42.00	0.12-0.20	0.0-2.9	4.0-10	.20	.20	5	5	56
	10-18	---	---	5-15	1.40-1.60	14.00-42.00	0.12-0.20	0.0-2.9	4.0-10	.20	.20			
	18-27	---	---	18-35	1.30-1.50	4.00-14.00	0.12-0.20	0.0-2.9	0.5-2.0	.20	.20			
	27-80	---	---	20-40	1.30-1.60	4.00-14.00	0.15-0.20	0.0-2.9	0.0-0.5	.28	.28			
Pantego, undrained---	0-18	---	---	5-15	1.40-1.60	14.00-42.00	0.12-0.20	0.0-2.9	4.0-10	.20	.20	5	5	56
	18-27	---	---	18-35	1.30-1.50	4.00-14.00	0.12-0.20	0.0-2.9	0.5-2.0	.20	.20			
	27-80	---	---	20-40	1.30-1.60	4.00-14.00	0.15-0.20	0.0-2.9	0.0-0.5	.28	.28			
PoA, PoB, PoC, PoD:														
Pelion---------------	0-5	---	---	2-10	1.35-1.75	42.00-141.00	0.03-0.06	0.0-2.9	0.5-2.0	.28	.28	3	2	134
	5-10	---	---	2-10	1.35-1.75	42.00-141.00	0.03-0.06	0.0-2.9	0.0-0.5	.28	.28			
	10-22	---	---	18-35	1.40-1.60	4.00-14.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28			
	22-39	---	---	18-50	1.40-1.75	0.01-4.00	0.06-0.10	0.0-2.9	0.0-0.5	.20	.20			
	39-80	---	---	10-40	1.40-1.60	4.00-14.00	0.06-0.10	0.0-2.9	0.0-0.5	.32	.32			
PuA:														
Plummer, undrained---	0-9	---	---	1-10	1.35-1.65	42.00-141.00	0.03-0.10	0.0-2.9	2.0-5.0	.15	.15	5	2	134
	9-50	---	---	1-10	1.35-1.65	42.00-141.00	0.03-0.10	0.0-2.9	0.5-2.0	.24	.24			
	50-80	---	---	15-30	1.50-1.70	1.40-14.00	0.07-0.15	0.0-2.9	0.0-0.5	.20	.20			
Osier, undrained-----	0-8	---	---	1-10	1.35-1.60	42.00-141.00	0.03-0.10	0.0-2.9	2.0-5.0	.02	.02	5	2	134
	8-48	---	---	1-10	1.40-1.60	42.00-141.00	0.03-0.10	0.0-2.9	0.2-0.8	.10	.10			
	48-80	---	---	2-5	1.40-1.60	141.00-141.00	0.02-0.05	0.0-2.9	0.2-0.8	.10	.10			
PxA:														
Paxville, ponded-----	0-15	---	---	8-25	1.30-1.40	14.00-42.00	0.12-0.16	0.0-2.9	2.0-10	.17	.17	5	8	0
	15-40	---	---	8-35	1.20-1.50	4.00-14.00	0.12-0.18	0.0-2.9	0.5-1.0	.24	.24			
	40-48	---	---	8-18	1.30-1.50	42.00-141.00	0.05-0.10	0.0-2.9	0.5-1.0	.24	.24			
	48-99	---	---	2-12	1.30-1.60	42.00-141.00	0.05-0.08	0.0-2.9	0.5-1.0	.15	.15			

Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
Paxville, drained----	0-15	---	---	8-25	1.30-1.40	14.00-42.00	0.12-0.16	0.0-2.9	2.0-10	.17	.17	5	3	86
	15-40	---	---	8-35	1.20-1.50	4.00-14.00	0.12-0.18	0.0-2.9	0.5-1.0	.24	.24			
	40-48	---	---	8-18	1.30-1.50	42.00-141.00	0.05-0.10	0.0-2.9	0.5-1.0	.24	.24			
	48-99	---	---	2-12	1.30-1.60	42.00-141.00	0.05-0.08	0.0-2.9	0.5-1.0	.15	.15			
RaA:														
Rains, drained-------	0-7	---	---	5-20	1.30-1.60	14.00-42.00	0.13-0.15	0.0-2.9	1.0-6.0	.20	.20	5	3	86
	7-12	---	---	5-20	1.30-1.60	14.00-42.00	0.06-0.19	0.0-2.9	0.5-1.0	.32	.32			
	12-20	---	---	18-35	1.30-1.60	4.00-14.00	0.12-0.19	0.0-2.9	0.5-1.0	.15	.15			
	20-62	---	---	18-40	1.30-1.50	4.00-14.00	0.15-0.19	0.0-2.9	0.5-1.0	.20	.20			
	62-85	---	---	15-45	1.30-1.60	4.00-14.00	0.12-0.19	0.0-2.9	0.5-1.0	.17	.17			
Rains, undrained-----	0-7	---	---	5-20	1.30-1.60	14.00-42.00	0.13-0.15	0.0-2.9	1.0-6.0	.20	.20	5	3	86
	7-12	---	---	5-20	1.30-1.60	14.00-42.00	0.06-0.19	0.0-2.9	0.5-1.0	.32	.32			
	12-20	---	---	18-35	1.30-1.60	4.00-14.00	0.12-0.19	0.0-2.9	0.5-1.0	.15	.15			
	20-62	---	---	18-40	1.30-1.50	4.00-14.00	0.15-0.19	0.0-2.9	0.5-1.0	.20	.20			
	62-85	---	---	15-45	1.30-1.60	4.00-14.00	0.12-0.19	0.0-2.9	0.5-1.0	.17	.17			
RuA:														
Rutlege, undrained---	0-15	---	---	2-10	1.30-1.50	42.00-141.00	0.10-0.15	0.0-2.9	3.0-9.0	.10	.10	5	2	134
	15-80	---	---	2-10	1.50-1.70	42.00-141.00	0.04-0.08	0.0-2.9	0.5-3.0	.05	.05			
Rutlege, drained-----	0-15	---	---	2-10	1.30-1.50	42.00-141.00	0.10-0.15	0.0-2.9	3.0-9.0	.10	.10	5	2	134
	15-80	---	---	2-10	1.50-1.70	42.00-141.00	0.04-0.08	0.0-2.9	0.5-3.0	.05	.05			
ThA, ThB:														
Thursa---------------	0-10	---	---	0-20	1.35-1.55	14.00-42.00	0.03-0.09	0.0-2.9	0.5-0.8	.15	.15	5	2	134
	10-35	---	---	20-35	1.60-1.75	4.00-14.00	0.11-0.14	0.0-2.9	0.0-0.5	.17	.17			
	35-50	---	---	20-60	1.60-1.75	4.00-14.00	0.11-0.14	0.0-2.9	0.0-0.5	.10	.10			
	50-80	---	---	20-60	1.60-1.75	4.00-14.00	0.10-0.14	0.0-2.9	0.0-0.5	.10	.10			
UcC:														
Uchee----------------	0-6	---	---	3-10	1.30-1.70	42.00-141.00	0.05-0.10	0.0-2.9	0.2-3.0	.24	.24	5	2	134
	6-26	---	---	3-10	1.30-1.70	42.00-141.00	0.05-0.10	0.0-2.9	0.0-0.5	.24	.24			
	26-47	---	---	25-50	1.40-1.60	1.40-4.00	0.10-0.16	3.0-5.9	0.0-0.5	.17	.17			
	47-80	---	---	15-40	1.40-1.60	1.40-14.00	0.10-0.16	3.0-5.9	0.0-0.5	.20	.20			
Ud:														
Udorthents, loamy----	0-80	---	---	10-35	1.40-1.60	4.00-14.00	0.12-0.15	0.0-2.9	0.0-0.1	.20	.20	5	5	56

Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
VaB, VaC:														
Vaucluse-------------	0-6	---	---	2-10	1.30-1.60	42.00-141.00	0.04-0.08	0.0-2.9	0.5-1.0	.20	.20	2	2	134
	6-15	---	---	2-10	1.30-1.60	42.00-141.00	0.04-0.08	0.0-2.9	0.0-0.5	.28	.28			
	15-29	---	---	18-35	1.35-1.75	4.00-14.00	0.10-0.15	0.0-2.9	0.0-0.2	.28	.28			
	29-58	---	---	18-45	1.75-1.95	0.42-4.00	0.04-0.08	0.0-2.9	0.0-0.1	.20	.20			
	58-80	---	---	5-30	1.55-1.90	14.00-42.00	0.04-0.08	0.0-2.9	0.0-0.1	.28	.28			
WaB:														
Wagram---------------	0-8	---	---	2-10	1.60-1.75	42.00-141.00	0.05-0.08	0.0-2.9	0.5-2.0	.24	.24	5	2	134
	8-24	---	---	2-10	1.60-1.75	42.00-141.00	0.05-0.08	0.0-2.9	0.0-1.0	.28	.28			
	24-83	---	---	10-35	1.35-1.60	4.00-14.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28			
WcB:														
Wakulla--------------	0-7	---	---	2-8	1.45-1.60	42.00-141.00	0.00-0.05	0.0-2.9	0.5-1.0	.10	.10	5	1	220
	7-24	---	---	2-8	1.45-1.60	42.00-141.00	0.00-0.05	0.0-2.9	0.0-0.5	.10	.10			
	24-42	---	---	5-12	1.45-1.60	42.00-141.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.17			
	42-85	---	---	2-8	1.45-1.60	42.00-141.00	0.00-0.05	0.0-2.9	0.0-0.5	.10	.10			
Candor---------------	0-8	---	---	1-4	1.60-1.70	42.00-141.00	0.02-0.06	0.0-2.9	0.5-1.0	.10	.10	5	1	220
	8-26	---	---	1-4	1.60-1.70	42.00-141.00	0.02-0.06	0.0-2.9	0.2-0.5	.10	.10			
	26-38	---	---	6-12	1.55-1.70	42.00-141.00	0.06-0.10	0.0-2.9	0.0-0.5	.20	.20			
	38-62	---	---	1-4	1.60-1.70	42.00-141.00	0.02-0.05	0.0-2.9	0.0-0.5	.10	.10			
	62-80	---	---	10-35	1.35-1.60	4.00-14.00	0.12-0.16	0.0-2.9	0.0-0.5	.24	.24			
WkB:														
Wakulla, moderately wet-----------------	0-7	---	---	2-8	1.45-1.60	42.00-141.00	0.00-0.05	0.0-2.9	0.5-1.0	.10	.10	5	1	220
	7-24	---	---	2-8	1.45-1.60	42.00-141.00	0.00-0.05	0.0-2.9	0.0-0.5	.10	.10			
	24-42	---	---	5-12	1.45-1.60	42.00-141.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.17			
	42-85	---	---	2-8	1.45-1.60	42.00-141.00	0.00-0.05	0.0-2.9	0.0-0.5	.10	.10			
Candor, moderately wet-----------------	0-8	---	---	1-4	1.60-1.70	42.00-141.00	0.02-0.06	0.0-2.9	0.5-1.0	.10	.10	5	1	220
	8-26	---	---	1-4	1.60-1.70	42.00-141.00	0.02-0.06	0.0-2.9	0.2-0.5	.10	.10			
	26-38	---	---	6-12	1.55-1.70	42.00-141.00	0.06-0.10	0.0-2.9	0.0-0.5	.20	.20			
	38-62	---	---	1-4	1.60-1.70	42.00-141.00	0.02-0.05	0.0-2.9	0.0-0.5	.10	.10			
	62-80	---	---	10-35	1.35-1.60	4.00-14.00	0.12-0.16	0.0-2.9	0.0-0.5	.24	.24			
WuB:														
Wakulla--------------	0-7	---	---	2-8	1.45-1.60	42.00-141.00	0.00-0.05	0.0-2.9	0.5-1.0	.10	.10	5	1	220
	7-24	---	---	2-8	1.45-1.60	42.00-141.00	0.00-0.05	0.0-2.9	0.0-0.5	.10	.10			
	24-42	---	---	5-12	1.45-1.60	42.00-141.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.17			
	42-85	---	---	2-8	1.45-1.60	42.00-141.00	0.00-0.05	0.0-2.9	0.0-0.5	.10	.10			

Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
Rimini----------------	0-4	---	---	0-3	1.40-1.60	141.00-141.00	0.02-0.05	0.0-2.9	0.5-1.0	.10	.10	5	1	220
	4-58	---	---	0-3	1.40-1.60	141.00-141.00	0.02-0.05	0.0-2.9	0.0-0.2	.10	.10			
	58-80	---	---	1-5	1.50-1.70	42.00-141.00	0.03-0.07	0.0-2.9	0.5-2.0	.10	.10			
	80-88	---	---	0-3	1.40-1.70	141.00-141.00	0.02-0.05	0.0-2.9	0.5-1.0	.10	.10			

Chemical Soil Properties

(Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	Inches	meq/100 g	meq/100 g	pH	mmhos/cm
AeB, AeC:					
Ailey----------------	0-5	0.5-1.5	0.5-2.5	4.5-6.5	0
	5-24	0.5-1.5	0.5-2.5	4.5-6.5	0
	24-36	1.5-4.0	0.3-1.0	4.5-5.5	0
	36-50	2.0-3.5	0.5-2.0	4.5-5.5	0
	50-80	1.5-3.0	0.5-2.0	4.5-5.5	0
AuB:					
Autryville-----------	0-9	1.0-3.0	1.0-2.4	4.5-6.5	0
	9-26	1.0-3.0	1.0-2.4	4.5-6.5	0
	26-46	2.0-5.0	0.8-2.7	4.5-5.5	0
	46-58	1.0-2.0	0.2-1.4	4.5-5.5	0
	58-85	2.0-7.0	0.8-3.5	4.5-5.5	0
BaA:					
Bibb, undrained------	0-6	2.8-11	4.0-10	3.6-5.5	0
	6-60	2.8-11	4.0-10	3.6-5.5	0
	60-80	1.6-6.8	4.0-10	3.6-5.5	0
BlC:					
Blanton--------------	0-7	1.2-3.0	0.9-2.2	4.5-6.0	0.0-2.0
	7-52	0.1-2.4	0.1-1.8	4.5-6.0	0.0-2.0
	52-67	1.0-2.9	0.8-2.2	4.5-5.5	0.0-2.0
	67-85	1.2-5.1	0.9-3.8	4.5-5.5	0.0-2.0
BrB:					
Bragg----------------	0-6	1.6-6.0	1.2-4.5	4.5-6.0	0
	6-30	1.8-5.8	1.4-4.3	4.5-5.5	0
	30-80	1.5-6.8	1.1-5.1	4.5-5.5	0
CaC:					
Candor---------------	0-8	1.2-2.6	0.9-2.0	3.6-6.0	0
	8-26	0.7-1.5	0.5-1.1	3.6-6.0	0
	26-38	0.6-2.3	0.4-1.7	3.6-5.5	0
	38-62	0.1-1.5	0.1-1.1	3.6-5.5	0
	62-80	1.0-4.6	0.8-3.5	3.6-5.5	0
Wakulla--------------	0-7	1.3-3.0	1.0-2.3	4.5-6.0	0
	7-24	0.2-1.9	0.2-1.4	4.5-6.0	0
	24-42	0.5-2.3	0.4-1.7	4.5-6.0	0
	42-85	0.2-1.9	0.2-1.4	4.5-6.0	0
CoA:					
Coxville, drained----	0-9	2.7-7.1	2.0-5.3	3.6-5.5	0
	9-11	1.8-5.0	1.4-3.7	3.6-5.5	0
	11-72	2.7-7.1	2.0-5.3	3.6-5.5	0
	72-80	0.5-6.6	0.3-5.0	3.6-5.5	0
Coxville, undrained--	0-9	2.7-7.1	2.0-5.3	3.6-5.5	0
	9-11	1.8-5.0	1.4-3.7	3.6-5.5	0
	11-72	2.7-7.1	2.0-5.3	3.6-5.5	0
	72-80	0.5-6.6	0.3-5.0	3.6-5.5	0
DbA:					
Dunbar, drained------	0-8	5.0-12	3.8-8.8	4.5-5.5	0
	8-14	1.8-5.8	1.4-4.3	4.5-5.5	0
	14-62	3.0-6.6	2.2-5.0	4.5-5.5	0
	62-92	0.5-6.6	0.3-5.0	3.6-6.0	0

Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	Inches	meq/100 g	meq/100 g	pH	mmhos/cm
Dunbar, undrained----	0-8	5.0-12	3.8-8.8	4.5-5.5	0
	8-14	1.8-5.8	1.4-4.3	4.5-5.5	0
	14-62	3.0-6.6	2.2-5.0	4.5-5.5	0
	62-92	0.5-6.6	0.3-5.0	3.6-6.0	0
DpA:					
Duplin---------------	0-8	1.5-6.3	1.1-4.7	5.1-7.3	0
	8-84	3.5-7.1	2.6-5.3	4.5-5.5	0
	84-100	1.8-7.1	1.4-5.3	4.5-5.5	0
GoA:					
Goldsboro------------	0-8	1.3-5.3	1.0-4.0	3.5-5.5	0
	8-15	0.2-1.9	0.2-1.4	3.5-5.5	0
	15-45	1.8-4.1	1.4-3.1	3.5-5.5	0
	45-80	2.0-4.5	1.5-3.4	3.5-5.5	0
GrB, GrC:					
Gritney--------------	0-9	3.6-11	2.0-7.0	3.5-6.0	0
	9-58	8.8-16	7.0-13	3.5-5.5	0
	58-80	2.5-9.0	2.0-8.0	3.5-5.5	0
JmA:					
Johnston, undrained--	0-30	19-38	9.0-22	4.5-5.5	0
	30-34	1.6-9.8	1.0-5.0	4.5-5.5	0
	34-80	1.2-9.5	1.0-6.0	4.5-5.5	0
Johnston, drained----	0-30	19-38	9.0-22	4.5-5.5	0
	30-34	1.6-9.8	1.0-5.0	4.5-5.5	0
	34-80	1.2-9.5	1.0-6.0	4.5-5.5	0
JoA:					
Johns----------------	0-8	2.8-6.5	2.1-4.9	4.5-5.5	0
	8-15	0.1-3.1	0.1-2.3	4.5-5.5	0
	15-32	1.8-4.6	1.4-3.5	4.5-5.5	0
	32-80	0.1-2.6	0.1-2.0	4.5-5.5	0
KaA:					
Kalmia---------------	0-8	2.2-6.0	1.7-4.5	4.5-5.5	0
	8-12	0.0-3.8	0.0-2.9	4.5-5.5	0
	12-32	0.5-5.1	0.4-3.8	4.5-5.5	0
	32-80	0.0-2.6	0.0-2.0	4.5-5.5	0
KnB:					
Kenansville, moderately wet------	0-8	1.4-5.5	1.1-4.1	4.5-6.0	0
	8-24	0.3-3.2	0.2-2.4	4.5-6.0	0
	24-36	0.5-2.3	0.4-1.7	4.5-6.0	0
	36-84	0.1-1.5	0.1-1.1	4.5-6.0	0
LuA:					
Lumbee, drained------	0-6	2.8-6.5	2.1-4.9	4.5-5.5	0
	6-14	0.1-3.8	0.1-2.9	4.5-5.5	0
	14-36	0.5-5.1	0.4-3.8	4.5-5.5	0
	36-80	0.1-2.6	0.1-2.0	4.5-5.5	0
Lumbee, undrained----	0-6	2.8-6.5	2.1-4.9	4.5-5.5	0
	6-14	0.0-3.8	0.0-2.9	4.5-5.5	0
	14-36	0.5-5.1	0.4-3.8	4.5-5.5	0
	36-80	0.0-2.6	0.0-2.0	4.5-5.5	0

Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	Inches	meq/100 g	meq/100 g	pH	mmhos/cm
LyA:					
Lynchburg------------	0-6	2.8-16	2.1-12	3.6-5.5	0
	6-10	0.2-2.1	0.2-1.6	3.6-5.5	0
	10-65	1.8-4.6	1.4-3.5	3.6-5.5	0
	65-80	2.0-6.1	1.5-4.6	3.6-5.5	0
MaA:					
Mantachie------------	0-18	3.2-8.8	2.4-6.6	4.5-5.5	0
	18-80	1.9-5.7	1.4-4.2	4.5-5.5	0
McA:					
McColl, ponded-------	0-9	3.8-22	2.8-16	4.5-7.3	0
	9-13	3.5-7.1	2.6-5.3	4.5-5.5	0
	13-42	2.5-5.6	1.9-4.2	4.5-5.5	0
	42-80	1.5-5.1	1.1-3.8	4.5-5.5	0
McColl, drained------	0-9	3.8-22	2.8-16	4.5-7.3	0
	9-13	3.5-7.1	2.6-5.3	4.5-5.5	0
	13-42	2.5-5.6	1.9-4.2	4.5-5.5	0
	42-80	1.5-5.1	1.1-3.8	4.5-5.5	0
MxA:					
Maxton---------------	0-8	1.1-5.3	0.8-4.0	4.5-6.0	0
	8-12	0.1-3.0	0.1-2.3	4.5-6.0	0
	12-33	1.8-4.6	1.4-3.5	4.5-5.5	0
	33-80	0.1-2.1	0.1-1.6	4.5-5.5	0
NcA, NcB:					
Noboco---------------	0-10	1.6-6.0	1.2-4.5	4.5-6.0	0
	10-13	0.5-3.8	0.4-2.8	4.5-6.0	0
	13-80	1.8-4.6	1.4-3.5	3.6-5.5	0
NoA, NoB:					
Norfolk--------------	0-9	1.3-5.3	1.0-4.0	3.5-6.0	0
	9-14	0.2-2.7	0.2-2.0	3.5-6.0	0
	14-70	1.8-4.6	1.4-3.5	3.5-5.5	0
	70-100	2.0-5.4	1.5-4.1	3.5-5.5	0
OcA:					
Ocilla---------------	0-10	3.2-7.0	2.4-5.2	4.5-5.5	0
	10-28	1.0-4.8	0.8-3.6	4.5-5.5	0
	28-46	3.8-9.9	2.8-7.4	4.5-5.5	0
	46-80	3.8-11	2.8-8.3	4.5-5.5	0
OsA:					
Osier, undrained-----	0-8	4.8-14	3.6-10	3.6-6.0	0
	8-48	0.8-4.2	0.6-3.1	3.6-6.0	0
	48-80	1.1-2.9	0.8-2.2	3.6-6.0	0
PaA:					
Pactolus-------------	0-8	1.3-5.7	1.0-4.3	3.5-5.5	0
	8-40	0.2-2.3	0.2-1.7	3.5-5.5	0
	40-80	0.2-2.3	0.2-1.7	3.5-5.5	0
PcA:					
Pamlico, undrained---	0-30	45-180	34-135	3.5-5.5	0
	30-80	2.4-14	1.8-10	3.5-5.5	0
Johnston, undrained--	0-30	19-38	9.0-22	4.5-5.5	0
	30-34	1.6-9.8	1.0-5.0	4.5-5.5	0
	34-80	1.2-9.5	1.0-6.0	4.5-5.5	0

Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	Inches	meq/100 g	meq/100 g	pH	mmhos/cm
PnA:					
Pantego, drained-----	0-10	10-26	7.7-20	3.5-5.5	0
	10-18	10-26	7.7-20	3.5-5.5	0
	18-27	5.6-13	4.2-9.9	3.5-5.5	0
	27-80	5.0-11	3.8-8.3	3.5-5.5	0
Pantego, undrained---	0-18	10-26	7.7-20	3.5-5.5	0
	18-27	5.6-13	4.2-9.9	3.5-5.5	0
	27-80	5.0-11	3.8-8.3	3.5-5.5	0
PoA, PoB, PoC, PoD:					
Pelion---------------	0-5	1.3-5.5	1.0-4.1	3.6-6.5	0
	5-10	0.2-2.1	0.2-1.6	3.6-6.5	0
	10-22	1.8-4.6	1.4-3.5	3.6-5.5	0
	22-39	1.8-6.1	1.4-4.6	3.6-5.5	0
	39-80	1.0-5.1	0.8-3.8	3.6-5.5	0
PuA:					
Plummer, undrained---	0-9	4.8-14	3.6-10	3.6-5.5	0
	9-50	1.4-7.0	1.0-5.2	3.6-5.5	0
	50-80	3.8-8.6	2.8-6.5	3.6-5.5	0
Osier, undrained-----	0-8	4.8-14	3.6-10	3.6-6.0	0
	8-48	0.8-4.2	0.6-3.1	3.6-6.0	0
	48-80	1.1-2.9	0.8-2.2	3.6-6.0	0
PxA:					
Paxville, ponded-----	0-15	6.5-29	4.9-22	3.6-6.5	0
	15-40	3.1-11	2.3-8.2	3.6-5.5	0
	40-48	3.1-6.8	2.3-5.1	3.6-5.5	0
	48-99	1.6-5.2	1.2-3.9	3.6-5.5	0
Paxville, drained----	0-15	6.5-29	4.9-22	3.6-6.5	0
	15-40	3.1-11	2.3-8.2	3.6-5.5	0
	40-48	3.1-6.8	2.3-5.1	3.6-5.5	0
	48-99	1.6-5.2	1.2-3.9	3.6-5.5	0
RaA:					
Rains, drained-------	0-7	3.5-18	2.6-14	3.6-6.5	0
	7-12	2.4-7.2	1.8-5.4	3.6-6.5	0
	12-20	5.6-11	4.2-8.2	3.6-5.5	0
	20-62	5.6-12	4.2-9.2	3.6-5.5	0
	62-85	4.9-14	3.7-10	3.6-5.5	0
Rains, undrained-----	0-7	3.5-18	2.6-14	3.6-6.5	0
	7-12	2.4-7.2	1.8-5.4	3.6-6.5	0
	12-20	5.6-11	4.2-8.2	3.6-5.5	0
	20-62	5.6-12	4.2-9.2	3.6-5.5	0
	62-85	4.9-14	3.7-10	3.6-5.5	0
RuA:					
Rutlege, undrained---	0-15	7.2-23	5.4-17	3.6-5.5	0
	15-80	1.6-9.2	1.2-6.9	3.6-5.5	0
Rutlege, drained-----	0-15	7.2-23	5.4-17	3.6-5.5	0
	15-80	1.6-9.2	1.2-6.9	3.6-5.5	0

Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	Inches	meq/100 g	meq/100 g	pH	mmhos/cm
ThA, ThB:					
Thursa----------------	0-10	1.1-3.7	0.8-2.8	4.5-6.0	0
	10-35	2.0-4.6	1.5-3.5	4.5-5.5	0
	35-50	2.0-7.1	1.5-5.3	4.5-5.5	0
	50-80	2.0-7.1	1.5-5.3	4.5-5.5	0
UcC:					
Uchee-----------------	0-6	0.8-7.8	0.6-5.8	4.5-5.5	0
	6-26	0.3-2.1	0.2-1.6	4.5-5.5	0
	26-47	2.5-6.1	1.9-4.6	4.5-5.5	0
	47-80	1.5-5.1	1.1-3.8	4.5-5.5	0
Ud:					
Udorthents, loamy----	0-80	1.0-3.7	0.8-2.8	4.5-6.0	0
VaB, VaC:					
Vaucluse-------------	0-6	1.3-3.2	1.0-2.4	4.5-6.0	0
	6-15	0.2-2.1	0.2-1.6	4.5-6.0	0
	15-29	1.8-4.0	1.4-3.0	3.6-5.5	0
	29-58	1.8-4.7	1.4-3.5	3.6-5.5	0
	58-80	0.5-3.2	0.4-2.4	3.6-5.5	0
WaB:					
Wagram----------------	0-8	1.3-5.5	1.0-4.1	4.5-6.0	0
	8-24	0.2-3.2	0.2-2.4	4.5-6.0	0
	24-83	1.0-4.6	0.8-3.5	4.5-6.0	0
WcB:					
Wakulla---------------	0-7	1.3-3.0	1.0-2.3	4.5-6.0	0
	7-24	0.2-1.9	0.2-1.4	4.5-6.0	0
	24-42	0.5-2.3	0.4-1.7	4.5-6.0	0
	42-85	0.2-1.9	0.2-1.4	4.5-6.0	0
Candor----------------	0-8	1.2-2.6	0.9-2.0	3.6-6.0	0
	8-26	0.7-1.5	0.5-1.1	3.6-6.0	0
	26-38	0.6-2.3	0.4-1.7	3.6-5.5	0
	38-62	0.1-1.5	0.1-1.1	3.6-5.5	0
	62-80	1.0-4.6	0.8-3.5	3.6-5.5	0
WkB:					
Wakulla, moderately wet-----------------	0-7	1.3-3.0	1.0-2.3	4.5-6.0	0
	7-24	0.2-1.9	0.2-1.4	4.5-6.0	0
	24-42	0.5-2.3	0.4-1.7	4.5-6.0	0
	42-85	0.2-1.9	0.2-1.4	4.5-6.0	0
Candor, moderately wet-----------------	0-8	1.2-2.6	0.9-2.0	3.6-6.0	0
	8-26	0.7-1.5	0.5-1.1	3.6-6.0	0
	26-38	0.6-2.3	0.4-1.7	3.6-5.5	0
	38-62	0.1-1.5	0.1-1.1	3.6-5.5	0
	62-80	1.0-4.6	0.8-3.5	3.6-5.5	0
WuB:					
Wakulla---------------	0-7	1.3-3.0	1.0-2.3	4.5-6.0	0
	7-24	0.2-1.9	0.2-1.4	4.5-6.0	0
	24-42	0.5-2.3	0.4-1.7	4.5-6.0	0
	42-85	0.2-1.9	0.2-1.4	4.5-6.0	0

Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Salinity
	Inches	meq/100 g	meq/100 g	pH	mmhos/cm
Rimini---------------	0-4	1.1-2.5	0.8-1.9	3.6-6.0	0
	4-58	0.0-0.8	0.0-0.6	3.6-6.0	0
	58-80	1.2-5.0	0.9-3.8	3.6-6.0	0
	80-88	1.1-2.5	0.8-1.9	3.6-6.0	0

Water Features

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
AeB, AeC:										
Ailey	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
AuB:										
Autryville	A	Very low								
			Dec-Apr	4.0-6.0	>6.0	---	---	None	---	None
			May-Nov	---	---	---	---	None	---	None
BaA:										
Bibb, undrained	D	Very high								
			Dec-Mar	0.0-1.0	>6.0	---	---	None	Brief	Frequent
			April	0.5-1.0	>6.0	---	---	None	Brief	Frequent
			May	1.5-4.0	>6.0	---	---	None	Brief	Frequent
			June	4.0-5.0	>6.0	---	---	None	---	---
			October	4.0-5.0	>6.0	---	---	None	---	---
			November	0.5-1.5	>6.0	---	---	None	Brief	Frequent
Johnston, undrained	D	Negligible								
			Dec-Apr	0.0	>6.0	0.0-1.0	Brief	Frequent	Long	Frequent
			May	1.0-2.7	>6.0	0.0-1.0	Brief	Frequent	---	---
			June	1.5-4.0	>6.0	0.0-1.0	Brief	Frequent	---	---
			Jul-Oct	4.0-5.0	>6.0	---	---	None	---	---
			November	1.0-2.7	>6.0	0.0-1.0	Brief	Frequent	Long	Frequent
BlC:										
Blanton	A	Low								
			Dec-Apr	4.0-6.0	5.0-6.0	---	---	None	---	None
			May-Nov	---	---	---	---	None	---	None
BrB:										
Bragg	C	Low								
			Jan-Dec	---	---	---	---	None	---	None
CaC:										
Candor	A	Low								
			Jan-Dec	---	---	---	---	None	---	None
Wakulla	A	Low								
			Jan-Dec	---	---	---	---	None	---	None

Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
CoA:										
Coxville, drained	C	Very high								
			Dec-Mar	0.0-1.0	>6.0	---	---	None	---	None
			April	1.0-2.7	>6.0	---	---	None	---	None
			May	4.0-5.0	>6.0	---	---	None	---	None
			Jun-Sep	---	---	---	---	None	---	None
			October	4.0-5.0	>6.0	---	---	None	---	None
			November	1.0-2.7	>6.0	---	---	None	---	None
Coxville, undrained	D	Very high								
			Dec-Apr	0.0-1.0	>6.0	---	---	None	---	None
			May	1.5-4.0	>6.0	---	---	None	---	None
			June	4.0-5.0	>6.0	---	---	None	---	None
			Jul-Sep	---	---	---	---	None	---	None
			October	4.0-5.0	>6.0	---	---	None	---	None
			November	0.5-1.5	>6.0	---	---	None	---	None
DbA:										
Dunbar, drained	C	Very high								
			Dec-Mar	1.0-2.0	>6.0	---	---	None	---	None
			April	1.5-4.0	>6.0	---	---	None	---	None
			May	4.0-5.0	>6.0	---	---	None	---	None
			Jun-Oct	---	---	---	---	None	---	None
			November	1.5-4.0	>6.0	---	---	None	---	None
Dunbar, undrained	D	Very high								
			Dec-Apr	1.0-2.0	>6.0	---	---	None	---	None
			May	1.5-4.0	>6.0	---	---	None	---	None
			June	4.0-5.0	>6.0	---	---	None	---	None
			Jul-Oct	---	---	---	---	None	---	None
			November	1.5-4.0	>6.0	---	---	None	---	None
DpA:										
Duplin	C	Low								
			Dec-Apr	2.0-3.0	>6.0	---	---	None	---	None
			May-Nov	---	---	---	---	None	---	None
GoA:										
Goldsboro	B	Low								
			Dec-Apr	2.0-3.0	>6.0	---	---	None	---	None
			May-Nov	---	---	---	---	None	---	None
GrB, GrC:										
Gritney	D	Low								
			Dec-Apr	1.5-3.0	2.5-4.0	---	---	None	---	None
			May-Nov	---	---	---	---	None	---	None

Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
JmA:										
Johnston, undrained	D	Negligible								
			Dec-Apr	0.0	>6.0	0.0-1.0	Brief	Frequent	Long	Frequent
			May	0.0-2.7	>6.0	0.0-1.0	Brief	Frequent	---	---
			June	0.0-4.0	>6.0	0.0-1.0	Brief	Frequent	---	---
			Jul-Oct	4.0-5.0	>6.0	---	---	None	---	---
			November	0.0-2.7	>6.0	0.0-1.0	Brief	Frequent	Long	Frequent
Johnston, drained	D	Negligible								
			Dec-Mar	0.0	>6.0	0.0-1.0	Brief	Frequent	Long	Frequent
			April	1.0-2.7	>6.0	0.0-1.0	Brief	Frequent	Long	Frequent
			May-Jun	4.0-5.0	>6.0	0.0-1.0	Brief	Frequent	---	---
			Jul-Oct	4.0-5.0	>6.0	---	---	None	---	---
			November	1.5-4.0	>6.0	0.0-1.0	Brief	Frequent	Long	Frequent
JoA:										
Johns	B	Low								
			Dec-Apr	1.5-3.0	>6.0	---	---	None	---	Rare
			May-Nov	---	---	---	---	None	---	Rare
KaA:										
Kalmia	B	Low								
			Jan-Dec	---	---	---	---	None	---	None
KnB:										
Kenansville, moderately wet	B	Very low								
			Dec-Apr	4.0-6.0	>6.0	---	---	None	---	None
			May-Nov	---	---	---	---	None	---	None
LuA:										
Lumbee, drained	B/D	Very high								
			Dec-Feb	0.0-1.0	>6.0	---	---	None	---	Rare
			March	0.5-1.5	>6.0	---	---	None	---	Rare
			April	1.5-4.0	>6.0	---	---	None	---	Rare
			May	4.0-5.0	>6.0	---	---	None	---	Rare
			Jun-Sep	---	---	---	---	None	---	Rare
			October	4.0-5.0	>6.0	---	---	None	---	Rare
			November	1.5-4.0	>6.0	---	---	None	---	Rare
Lumbee, undrained	B/D	Negligible								
			Dec-Apr	0.0-1.0	>6.0	0.0-1.0	Brief	Occasional	---	Rare
			May	1.5-4.0	>6.0	---	---	None	---	Rare
			June	4.0-5.0	>6.0	---	---	None	---	Rare
			Jul-Sep	---	---	---	---	None	---	Rare
			October	4.0-5.0	>6.0	---	---	None	---	Rare
			November	1.0-2.7	>6.0	---	---	None	---	Rare

Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
LyA:										
Lynchburg	B/D	Very high								
			Dec-Apr	0.5-1.5	>6.0	---	---	None	---	None
			May	1.5-6.6	>6.0	---	---	None	---	None
			Jun-Oct	---	---	---	---	None	---	None
			November	1.5-6.6	>6.0	---	---	None	---	None
MaA:										
Mantachie	B/D	Very high								
			Dec-May	1.0-1.5	>6.0	---	---	None	---	Rare
			Jun-Nov	---	---	---	---	None	---	Rare
McA:										
McColl, ponded	D	Negligible								
			Dec-Apr	0.0	>6.0	0.0-1.0	Long	Frequent	---	None
			May	1.0-2.7	>6.0	---	---	None	---	None
			June	1.5-4.0	>6.0	---	---	None	---	None
			July	4.0-5.0	>6.0	---	---	None	---	None
			Aug-Sep	---	---	---	---	None	---	None
			October	4.0-5.0	>6.0	---	---	None	---	None
			November	0.5-1.5	>6.0	0.0-1.0	Long	Frequent	---	None
McColl, drained	D	Very high								
			Dec-Feb	0.0	>6.0	---	---	None	---	None
			March	0.5-1.5	>6.0	---	---	None	---	None
			April	1.5-4.0	>6.0	---	---	None	---	None
			May	4.0-5.0	>6.0	---	---	None	---	None
			Jun-Sep	---	---	---	---	None	---	None
			October	4.0-5.0	>6.0	---	---	None	---	None
			November	1.5-4.0	>6.0	---	---	None	---	None
MxA:										
Maxton	B	Low								
			Jan-Dec	---	---	---	---	None	---	None
NcA, NcB:										
Noboco	B	Low								
			Dec-Apr	2.5-3.5	>6.0	---	---	None	---	None
			May	3.5-5.0	>6.0	---	---	None	---	None
			Jun-Oct	---	---	---	---	None	---	None
			November	3.5-5.0	>6.0	---	---	None	---	None
NoA, NoB:										
Norfolk	B	Low								
			Dec-Mar	4.0-6.6	>6.0	---	---	None	---	None
			Apr-Nov	---	---	---	---	None	---	None

Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
OcA:										
Ocilla	B/D	Low								
			Dec-Apr	1.0-2.5	>6.0	---	---	None	---	None
			May-Nov	---	---	---	---	None	---	None
OsA:										
Osier, undrained	A/D	Very high								
			Dec-Apr	0.0-1.0	>6.0	---	---	None	---	Rare
			May	1.0-2.7	>6.0	---	---	None	---	Rare
			June	1.5-4.0	>6.0	---	---	None	---	Rare
			July	4.0-5.0	>6.0	---	---	None	---	Rare
			Aug-Sep	---	---	---	---	None	---	Rare
			October	4.0-5.0	>6.0	---	---	None	---	Rare
			November	1.0-2.7	>6.0	---	---	None	---	Rare
PaA:										
Pactolus	A	Very low								
			Dec-Apr	1.5-3.0	>6.0	---	---	None	---	None
			May-Nov	---	---	---	---	None	---	None
PcA:										
Pamlico, undrained	D	Negligible								
			Nov-May	0.0	>6.0	0.0-3.0	Long	Frequent	Long	Frequent
			Jun-Oct	0.0-1.0	>6.0	0.0-3.0	Long	Frequent	Long	Frequent
Johnston, undrained	D	Negligible								
			Dec-Apr	0.0	>6.0	0.0-1.0	Long	Frequent	Long	Frequent
			May	1.0-2.7	>6.0	0.0-1.0	Long	Frequent	Long	Frequent
			June	1.5-4.0	>6.0	0.0-1.0	Long	Frequent	Long	Frequent
			July	4.0-5.0	>6.0	0.0-1.0	Long	Frequent	Long	Frequent
			Aug-Oct	4.0-5.0	>6.0	0.0-1.0	Long	Frequent	---	---
			November	1.0-2.7	>6.0	0.0-1.0	Long	Frequent	Long	Frequent
PnA:										
Pantego, drained	B/D	Very high								
			Dec-Feb	0.0-1.0	>6.0	---	---	None	---	Rare
			March	0.5-1.5	>6.0	---	---	None	---	Rare
			April	1.5-4.0	>6.0	---	---	None	---	Rare
			May	4.0-5.0	>6.0	---	---	None	---	Rare
			Jun-Sep	---	---	---	---	None	---	Rare
			October	4.0-5.0	>6.0	---	---	None	---	Rare
			November	1.5-4.0	>6.0	---	---	None	---	Rare

Water Features—Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
Pantego, undrained	B/D	Very high								
			Dec-Apr	0.0-1.0	>6.0	---	---	None	---	Rare
			May	0.5-1.0	>6.0	---	---	None	---	Rare
			June	1.5-4.0	>6.0	---	---	None	---	Rare
			July	4.0-5.0	>6.0	---	---	None	---	Rare
			Aug-Sep	---	---	---	---	None	---	Rare
			October	4.0-5.0	>6.0	---	---	None	---	Rare
			November	1.0-2.7	>6.0	---	---	None	---	Rare
PoA, PoB, PoC, PoD:										
Pelion	C/D	Low								
			Dec-Mar	1.0-2.5	2.0-3.0	---	---	None	---	None
				3.3-5.0	>6.0					
			April	3.3-5.0	>6.0	---	---	None	---	None
			May-Oct	---	---	---	---	None	---	None
			November	1.0-2.5	2.0-3.0	---	---	None	---	None
PuA:										
Plummer, undrained	A/D	Very high								
			Dec-May	0.0-1.0	>6.0	---	---	None	---	None
			June	1.0-2.7	>6.0	---	---	None	---	None
			July	1.5-4.0	>6.0	---	---	None	---	None
			Aug-Oct	4.0-5.0	>6.0	---	---	None	---	None
			November	1.0-2.7	>6.0	---	---	None	---	None
Osier, undrained	A/D	Very high								
			Dec-Apr	0.0-1.0	>6.0	---	---	None	Very brief	Frequent
			May	1.0-2.7	>6.0	---	---	None	---	---
			June	1.5-4.0	>6.0	---	---	None	---	---
			July	4.0-5.0	>6.0	---	---	None	---	---
			October	4.0-5.0	>6.0	---	---	None	---	---
			November	1.0-2.7	>6.0	---	---	None	Very brief	Frequent
PxA:										
Paxville, ponded	B/D	Negligible								
			Nov-May	0.0	>6.0	0.0-1.0	Long	Frequent	Brief	Rare
			June	0.0-1.0	>6.0	0.0-1.0	Long	Frequent	Brief	Rare
			Jul-Oct	0.0-1.0	>6.0	---	---	None	Brief	Rare
Paxville, drained	B/D	Very high								
			Dec-Feb	0.0	>6.0	---	---	None	Brief	Rare
			March	0.5-1.5	>6.0	---	---	None	Brief	Rare
			April	1.0-2.7	>6.0	---	---	None	Brief	Rare
			May	1.5-4.0	>6.0	---	---	None	Brief	Rare
			Jun-Oct	---	---	---	---	None	Brief	Rare
			November	0.5-1.5	>6.0	---	---	None	Brief	Rare

Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
RaA:										
Rains, drained------------	B	Very high								
			Dec-Mar	0.0-1.0	>6.0	---	---	None	---	None
			April	1.0-2.7	>6.0	---	---	None	---	None
			May	4.0-5.0	>6.0	---	---	None	---	None
			Jun-Sep	---	---	---	---	None	---	None
			October	4.0-5.0	>6.0	---	---	None	---	None
			November	1.0-2.7	>6.0	---	---	None	---	None
Rains, undrained----------	D	Very high								
			Dec-Apr	0.0-1.0	>6.0	---	---	None	---	None
			May	1.5-4.0	>6.0	---	---	None	---	None
			June	4.0-5.0	>6.0	---	---	None	---	None
			Jul-Sep	---	---	---	---	None	---	None
			October	4.0-5.0	>6.0	---	---	None	---	None
			November	0.5-1.5	>6.0	---	---	None	---	None
RuA:										
Rutlege, undrained--------	D	Very high								
			Dec-Apr	0.0-0.5	>6.0	---	---	None	---	Rare
			May	1.0-2.7	>6.0	---	---	None	---	Rare
			June	1.5-4.0	>6.0	---	---	None	---	Rare
			July	4.0-5.0	>6.0	---	---	None	---	Rare
			Aug-Sep	---	---	---	---	None	---	Rare
			October	4.0-5.0	>6.0	---	---	None	---	Rare
			November	1.0-2.7	>6.0	---	---	None	---	Rare
Rutlege, drained----------	A	Very high								
			Dec-Mar	0.0-0.5	>6.0	---	---	None	---	Rare
			April	1.0-2.7	>6.0	---	---	None	---	Rare
			May	1.5-4.0	>6.0	---	---	None	---	Rare
			June	4.0-5.0	>6.0	---	---	None	---	Rare
			Jul-Sep	---	---	---	---	None	---	Rare
			October	4.0-5.0	>6.0	---	---	None	---	Rare
			November	1.5-4.0	>6.0	---	---	None	---	Rare
ThA, ThB:										
Thursa--------------------	B	Low								
			Jan-Dec	---	---	---	---	None	---	None
UcC:										
Uchee---------------------	C	Medium								
			Dec-Apr	3.5-5.0	4.5-6.0	---	---	None	---	None
			May-Nov	---	---	---	---	None	---	None

Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
Ud:										
Udorthents, loamy	B	Medium								
			Jan-Dec	---	---	---	---	None	---	None
VaB, VaC:										
Vaucluse	C	Medium								
			Jan-Dec	---	---	---	---	None	---	None
WaB:										
Wagram	B	Low								
			Jan-Dec	---	---	---	---	None	---	None
WcB:										
Wakulla	A	Very low								
			Jan-Dec	---	---	---	---	None	---	None
Candor	A	Very low								
			Jan-Dec	---	---	---	---	None	---	None
WkB:										
Wakulla, moderately wet	A	Very low								
			Dec-Mar	4.0-6.0	>6.0	---	---	None	---	None
			Apr-Nov	---	---	---	---	None	---	None
Candor, moderately wet	A	Very low								
			Dec-Mar	4.0-6.0	>6.0	---	---	None	---	None
			Apr-Nov	---	---	---	---	None	---	None
WuB:										
Wakulla	A	Low								
			Jan-Dec	---	---	---	---	None	---	None
Rimini	A	Very low								
			Jan-Dec	---	---	---	---	None	---	None

Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
AeB, AeC:									
Ailey	Fragipan	26-60	---	---	0	---	None	Moderate	Moderate
AeC:									
Ailey	Fragipan	26-60	---	---	0	---	None	Moderate	Moderate
AuB:									
Autryville	---	---	---	---	0	---	None	Low	High
BaA:									
Bibb, undrained	---	---	---	---	0	---	None	High	Moderate
Johnston, undrained	---	---	---	---	0	---	None	High	High
BlC:									
Blanton	---	---	---	---	0	---	None	High	High
BrB:									
Bragg	---	---	---	---	0	---	None	Moderate	High
CaC:									
Candor	---	---	---	---	0	---	None	Low	High
Wakulla	---	---	---	---	0	---	None	Low	High
CoA:									
Coxville, drained	---	---	---	---	0	---	None	High	High
Coxville, undrained	---	---	---	---	0	---	None	High	High
DbA:									
Dunbar, drained	---	---	---	---	0	---	None	High	High
Dunbar, undrained	---	---	---	---	0	---	None	High	High
DpA:									
Duplin	---	---	---	---	0	---	None	High	High
GoA:									
Goldsboro	---	---	---	---	0	---	None	Moderate	High
GrB, GrC:									
Gritney	---	---	---	---	0	---	None	High	High

Soil Features—Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Thickness	Restrictive layer: Hardness	Subsidence: Initial	Subsidence: Total	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In	In		In	In			
JmA:									
Johnston, undrained	---	---	---	---	0	---	None	High	High
Johnston, drained	---	---	---	---	0	---	None	High	High
JoA:									
Johns	Strongly contrasting textural stratification	20-40	---	---	0	---	None	Moderate	High
KaA:									
Kalmia	Strongly contrasting textural stratification	20-40	---	---	0	---	None	Moderate	Moderate
KnB:									
Kenansville, moderately wet	---	---	---	---	0	---	None	Low	High
LuA:									
Lumbee, drained	Strongly contrasting textural stratification	20-40	---	---	0	---	None	High	High
Lumbee, undrained	Strongly contrasting textural stratification	20-40	---	---	0	---	None	High	High
LyA:									
Lynchburg	---	---	---	---	0	---	None	High	High
MaA:									
Mantachie	---	---	---	---	---	---	None	High	High
McA:									
McColl, ponded	Fragipan	15-40	15-32	Weakly cemented	0	---	None	High	High
McColl, drained	Fragipan	15-40	15-32	Weakly cemented	0	---	None	High	High
MxA:									
Maxton	Strongly contrasting textural stratification	20-40	---	---	0	---	None	Moderate	Moderate

Soil Features—Continued

Map symbol and soil name	Restrictive layer				Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness	Initial	Total		Uncoated steel	Concrete
		In	In		In	In			
NcA, NcB:									
Noboco	---	---	---	---	0	---	None	Moderate	High
NoA, NoB:									
Norfolk	---	---	---	---	0	---	None	Moderate	High
OcA:									
Ocilla	---	---	---	---	0	---	None	High	Moderate
OsA:									
Osier, undrained	---	---	---	---	0	---	None	High	High
PaA:									
Pactolus	---	---	---	---	0	---	None	Low	High
PcA:									
Pamlico, undrained	---	---	---	---	4-12	10-29	None	High	High
Johnston, undrained	---	---	---	---	0	---	None	High	High
PnA:									
Pantego, drained	---	---	---	---	0	---	None	High	High
Pantego, undrained	---	---	---	---	0	---	None	High	High
PoA, PoB, PoC, PoD:									
Pelion	Fragipan	15-60	---	---	0	---	None	High	High
PuA:									
Plummer, undrained	---	---	---	---	0	---	None	Moderate	High
Osier, undrained	---	---	---	---	0	---	None	High	High
PxA:									
Paxville, ponded	---	---	---	---	0	---	None	High	High
Paxville, drained	---	---	---	---	0	---	None	High	High
RaA:									
Rains, drained	---	---	---	---	0	---	None	High	High
Rains, undrained	---	---	---	---	0	---	None	High	High
RuA:									
Rutlege, undrained	---	---	---	---	0	---	None	High	High
Rutlege, drained	---	---	---	---	0	---	None	High	High

Soil Features—Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Thickness	Restrictive layer: Hardness	Subsidence: Initial	Subsidence: Total	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In	In		In	In			
ThA, ThB:									
Thursa	---	---	---	---	0	---	None	Moderate	Moderate
UcC:									
Uchee	---	---	---	---	0	---	None	Low	High
Ud:									
Udorthents, loamy	---	---	---	---	0	---	None	Moderate	High
VaB, VaC:									
Vaucluse	Fragipan	15-35	---	---	0	---	None	Low	High
WaB:									
Wagram	---	---	---	---	0	---	None	Low	High
WcB:									
Wakulla	---	---	---	---	0	---	None	Low	High
Candor	---	---	---	---	0	---	None	Low	High
WkB:									
Wakulla, moderately wet	---	---	---	---	0	---	None	Low	High
Candor, moderately wet	---	---	---	---	0	---	None	Low	High
WuB:									
Wakulla	---	---	---	---	0	---	None	Low	High
Rimini	---	---	---	---	0	---	None	Low	Low

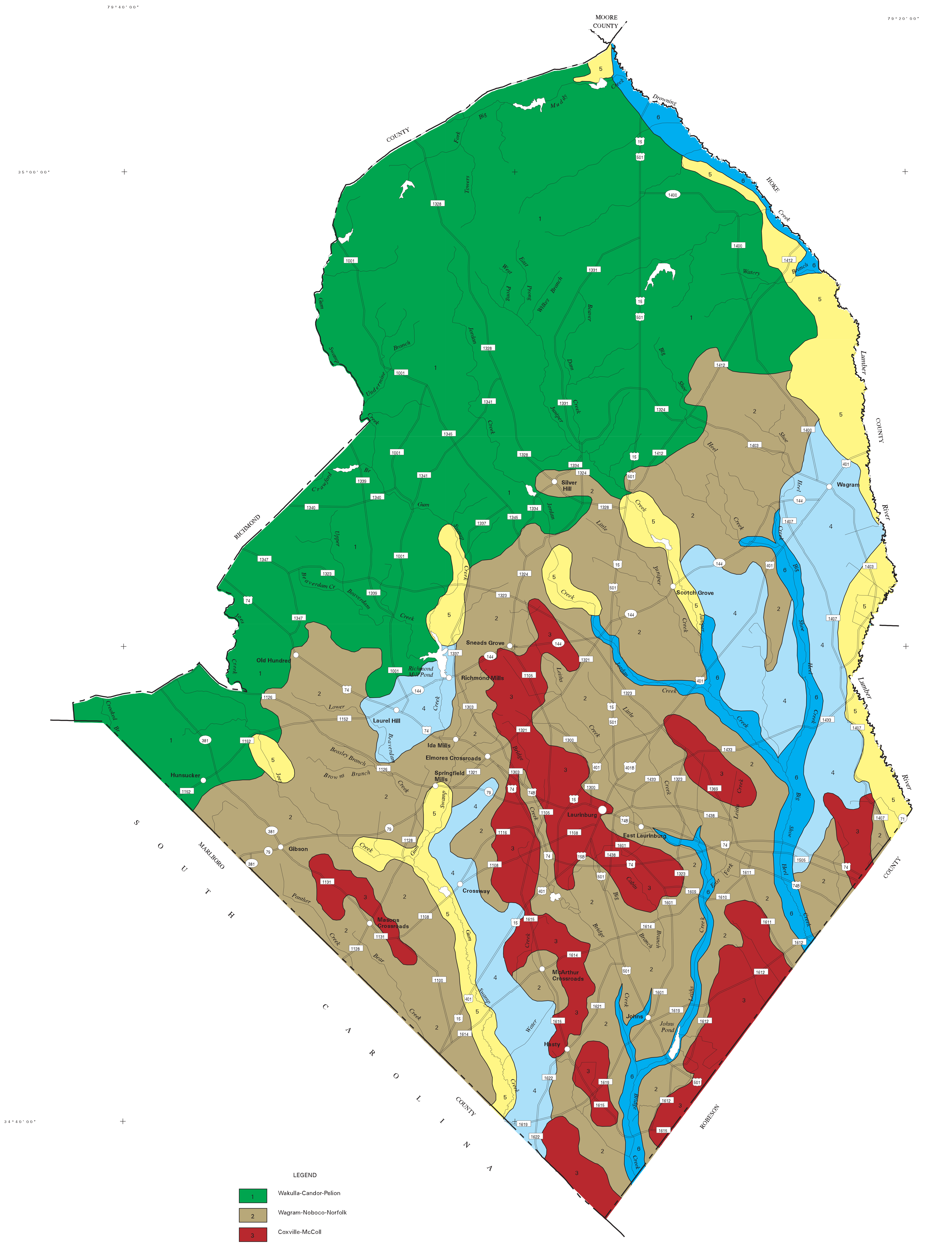
Taxonomic Classification of the Soils

(An asterisk in the first column indicates a taxadjunct to the series. See text for a description of those characteristics that are outside the range of the series.)

Soil name	Family or higher taxonomic class
Ailey	Loamy, kaolinitic, thermic Arenic Kanhapludults
Autryville	Loamy, siliceous, subactive, thermic Arenic Paleudults
Bibb	Coarse-loamy, siliceous, active, acid, thermic Typic Fluvaquents
Blanton	Loamy, siliceous, subactive, thermic Grossarenic Paleudults
Bragg	Fine-loamy, siliceous, semiactive, acid, thermic Typic Udorthents
Candor	Sandy, siliceous, thermic Arenic Paleudults
Coxville	Fine, kaolinitic, thermic Typic Paleaquults
Dunbar	Fine, kaolinitic, thermic Aeric Paleaquults
Duplin	Fine, kaolinitic, thermic Aquic Paleudults
Goldsboro	Fine-loamy, siliceous, subactive, thermic Aquic Paleudults
Gritney	Fine, mixed, semiactive, thermic Aquic Hapludults
Johns	Fine-loamy over sandy or sandy-skeletal, siliceous, semiactive, thermic Aquic Hapludults
Johnston	Coarse-loamy, siliceous, active, acid, thermic Cumulic Humaquepts
Kalmia	Fine-loamy over sandy or sandy-skeletal, siliceous, semiactive, thermic Typic Hapludults
Kenansville	Loamy, siliceous, subactive, thermic Arenic Hapludults
Lumbee	Fine-loamy over sandy or sandy-skeletal, siliceous, subactive, thermic Typic Endoaquults
Lynchburg	Fine-loamy, siliceous, semiactive, thermic Aeric Paleaquults
Mantachie	Fine-loamy, siliceous, semiactive, acid, thermic Aeric Haplaquepts
Maxton	Fine-loamy over sandy or sandy-skeletal, siliceous, subactive, thermic Typic Hapludults
McColl	Fine, kaolinitic, thermic Typic Fragiaquults
Noboco	Fine-loamy, siliceous, subactive, thermic Oxyaquic Paleudults
Norfolk	Fine-loamy, siliceous, thermic Typic Kandiudults
Ocilla	Loamy, siliceous, semiactive, thermic Aquic Arenic Paleudults
Osier	Siliceous, thermic Typic Psammaquents
Pactolus	Thermic, coated Aquic Quartzipsamments
Pamlico	Sandy or sandy-skeletal, siliceous, dysic, thermic Terric Haplosaprists
Pantego	Fine-loamy, siliceous, semiactive, thermic Umbric Paleaquults
Paxville	Fine-loamy, siliceous, semiactive, thermic Typic Umbraquults
Pelion	Fine-loamy, kaolinitic, thermic Aquic Kanhapludults
Plummer	Loamy, siliceous, subactive, thermic Grossarenic Paleaquults
Rains	Fine-loamy, siliceous, semiactive, thermic Typic Paleaquults
Rimini	Sandy, siliceous, thermic Entic Grossarenic Alorthods
Rutlege	Sandy, siliceous, thermic Typic Humaquepts
Thursa	Fine-loamy, siliceous, thermic Typic Kandiudults
Uchee	Loamy, kaolinitic, thermic Arenic Kanhapludults
Udorthents	Udorthents
Vaucluse	Fine-loamy, kaolinitic, thermic Typic Kanhapludults
Wagram	Loamy, kaolinitic, thermic Arenic Kandiudults
Wakulla	Siliceous, thermic Psammentic Hapludults

NRCS Accessibility Statement

The Natural Resources Conservation Service (NRCS) is committed to making its information accessible to all of its customers and employees. If you are experiencing accessibility issues and need assistance, please contact our Helpdesk by phone at 1-800-457-3642 or by e-mail at ServiceDesk-FTC@ftc.usda.gov. For assistance with publications that include maps, graphs, or similar forms of information, you may also wish to contact our State or local office. You can locate the correct office and phone number at http://offices.sc.egov.usda.gov/locator/app.



LEGEND

1	Wakulla-Candor-Pelion
2	Wagram-Noboco-Norfolk
3	Coxville-McColl
4	Autryville-Blanton
5	Rutlege-Johnston-Kenansville
6	Johnston-Pamlico

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
NORTH CAROLINA AGRICULTURAL RESEARCH SERVICE
NORTH CAROLINA AGRICULTURAL EXPERIMENT STATION
NORTH CAROLINA COOPERATIVE EXTENSION SERVICE
SCOTLAND SOIL AND WATER CONSERVATION DISTRICT
SCOTLAND COUNTY BOARD OF COMMISSIONERS

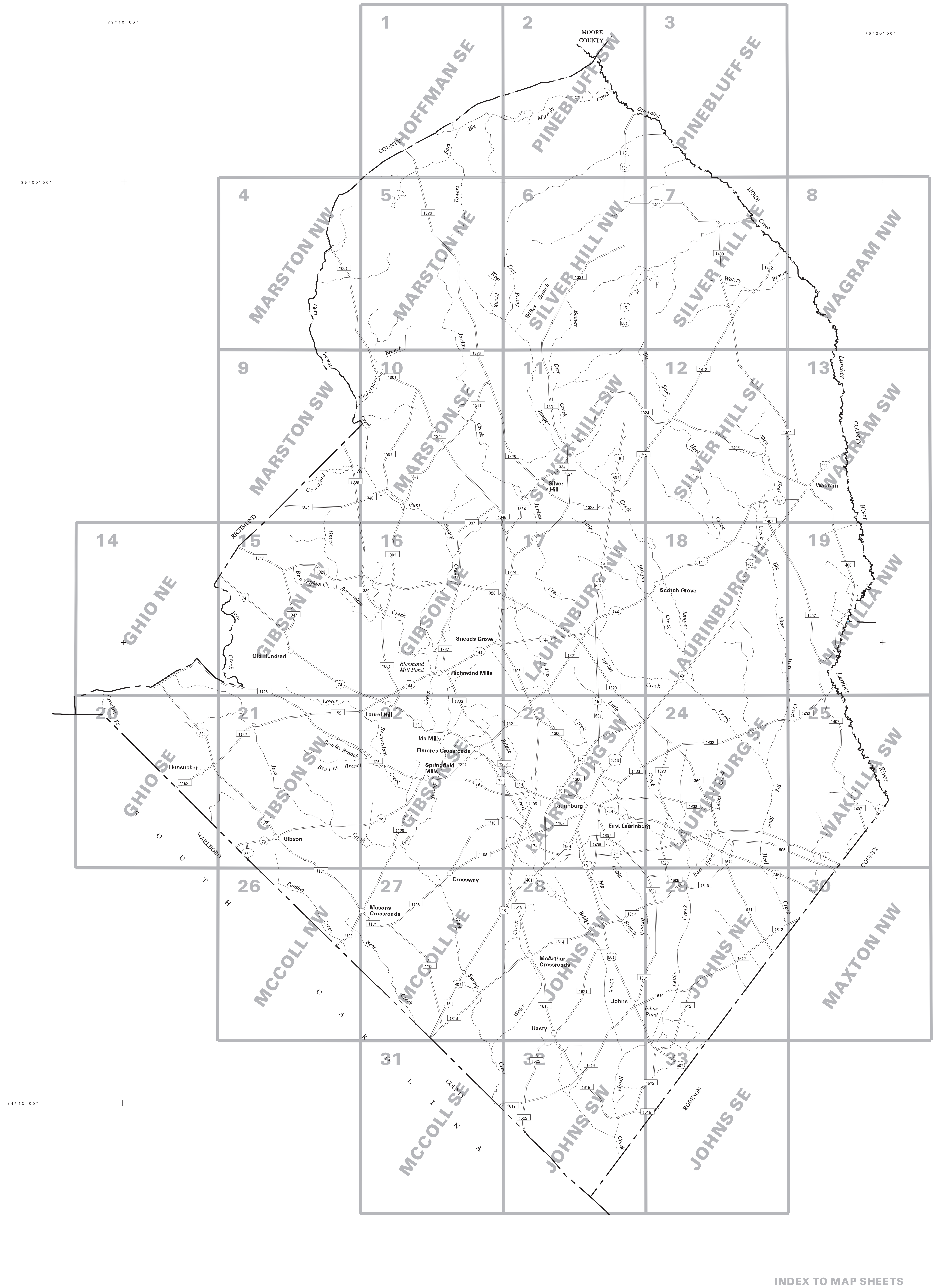
GENERAL SOIL MAP
SCOTLAND COUNTY, NORTH CAROLINA

1 0 1 2 3
MILES

1 0 1 2 3 4 5 6
KILOMETERS

SCALE = 1:85000

Each area outlined on this map consists of more than one kind of soil. The map is thus meant for general planning rather than a basis for decisions on the use of specific tracts.



INDEX TO MAP SHEETS
SCOTLAND COUNTY, NORTH CAROLINA

MILES

KILOMETERS

SCALE = 1:85000

SOIL LEGEND

SYMBOL	NAME
AeB	Ailey sand, 0 to 8 percent slopes
AeC	Ailey sand, 8 to 15 percent slopes
AuB	Autryville sand, 0 to 6 percent slopes
BaA	Bibb soils, 0 to 2 percent slopes, frequently flooded
BlC	Blanton sand, 8 to 15 percent slopes
BrB	Bragg loamy sand, 1 to 4 percent slopes
CaC	Candor and Wakulla soils, 8 to 15 percent slopes
CoA	Coxville loam, 0 to 2 percent slopes
DbA	Dunbar fine sandy loam, 0 to 2 percent slopes
DpA	Duplin sandy loam, 0 to 2 percent slopes
GoA	Goldsboro loamy sand, 0 to 2 percent slopes
GrB	Gritney sandy loam, 2 to 6 percent slopes
GrC	Gritney sandy loam, 6 to 10 percent slopes
JmA	Johnston soils, 0 to 2 percent slopes, frequently flooded
JoA	Johns fine sandy loam, 0 to 2 percent slopes, rarely flooded
KaA	Kalmia loamy sand, 0 to 2 percent slopes
KnB	Kenansville loamy sand, moderately wet, 0 to 4 percent slopes
LuA	Lumbee fine sandy loam, 0 to 2 percent slopes, rarely flooded
LyA	Lynchburg sandy loam, 0 to 2 percent slopes
M-W	Miscellaneous water
MaA	Mantachie soils, 0 to 2 percent slopes, rarely flooded
McA	McColl loam, 0 to 1 percent slopes, ponded
MxA	Maxton loamy sand, 0 to 2 percent slopes
NcA	Noboco loamy sand, 0 to 2 percent slopes
NcB	Noboco loamy sand, 2 to 6 percent slopes
NoA	Norfolk loamy sand, 0 to 2 percent slopes
NoB	Norfolk loamy sand, 2 to 6 percent slopes
OcA	Ocilla loamy sand, 0 to 2 percent slopes
OsA	Osier loamy sand, 0 to 2 percent slopes, rarely flooded
PaA	Pactolus loamy sand, 0 to 2 percent slopes
PcA	Pamlico and Johnston soils, 0 to 1 percent slopes, frequently flooded
PnA	Pantego loam, 0 to 2 percent slopes
PoA	Pelion loamy sand, 0 to 2 percent slopes
PoB	Pelion loamy sand, 2 to 6 percent slopes
PoC	Pelion loamy sand, 6 to 10 percent slopes
PoD	Pelion loamy sand, 10 to 15 percent slopes
PuA	Plummer and Osier soils, 0 to 2 percent slopes
PxA	Paxville loam, 0 to 1 percent slopes, rarely flooded
RaA	Rains fine sandy loam, 0 to 2 percent slopes
RuA	Rutlege loamy sand, 0 to 2 percent slopes, rarely flooded
ThA	Thursa loamy sand, 0 to 2 percent slopes
ThB	Thursa loamy sand, 2 to 6 percent slopes
UcC	Uchee loamy sand, 6 to 12 percent slopes
Ud	Udorthents, borrow pits
VaB	Vaucluse loamy sand, 2 to 8 percent slopes
VaC	Vaucluse loamy sand, 8 to 15 percent slopes
W	Water
WaB	Wagram loamy sand, 0 to 6 percent slopes
WcB	Wakulla and Candor soils, 0 to 8 percent slopes
WkB	Wakulla and Candor soils, moderately wet, 0 to 8 percent slopes
WuB	Wakulla-Rimini complex, 0 to 10 percent slopes

CONVENTIONAL AND SPECIAL SYMBOLS LEGEND

SOIL SURVEY FEATURES

SOIL DELINEATIONS AND SYMBOLS — AeB BrB

Borrow pits

Severely eroded spot

CULTURAL FEATURES

BOUNDARIES

County or parish

Field sheet matchline & neatline

TRANSPORTATION

Divided road

Other road

ROAD EMBLEMS

Interstate — 173

Federal — 287

State — 52

County — 1283

HYDROGRAPHIC FEATURES

Unclassified stream

Drainage end (indicates direction of flow)

79° 33′45″ | 79° 30′00″
35° 03′45″ | 35° 03′45″

35° 00′00″ | 35° 00′00″
79° 33′45″ | 79° 30′00″

Joins sheet 2, Pinebluff SW

Joins sheet 4, Marston NW

Joins sheet 5, Marston NE

Joins sheet 6, Silver Hill NW

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES: 0.5 — 0 — 0.5

FEET: 500 — 0 — 500 — 1000 — 1500 — 2000 — 2500 — 3000 — 3500

KILOMETERS: 0.5 — 0 — 0.5

2 PINEBLUFF SW
4 MARSTON NW
5 MARSTON NE
6 SILVER HILL NW

INDEX TO ADJOINING 3.75 MAPS

HOFFMAN SE, NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 1 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

79° 30′00″ | 79° 26′15″
35° 03′45″ | 35° 03′45″

Joins sheet 1, Hoffman SE

Joins sheet 3, Pinebluff SE

35° 00′00″ | 35° 00′00″
79° 30′00″ | 79° 26′15″

Joins sheet 5, Marston NE

Joins sheet 6, Silver Hill NW

Joins sheet 7, Silver Hill NE

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

1		3
5	6	7

1 HOFFMAN SE
3 PINEBLUFF SE
5 MARSTON NE
6 SILVER HILL NW
7 SILVER HILL NE

INDEX TO ADJOINING 3.75 MAPS

PINEBLUFF SW, NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 2 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

79° 26′15″ 79° 22′30″

35° 03′45″ 35° 03′45″

Joins sheet 2, Pinebluff SW

35° 00′00″ 35° 00′00″

79° 26′15″ 79° 22′30″

Joins sheet 6, Silver Hill NW

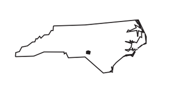
Joins sheet 7, Silver Hill NE

Joins sheet 8, Wagram NW

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

2		
6	7	8

2 PINEBLUFF SW
6 SILVER HILL NW
7 SILVER HILL NE
8 WAGRAM NW

INDEX TO ADJOINING 3.75 MAPS

PINEBLUFF SE, NORTH CAROLINA

3.75 MINUTE SERIES
SHEET NUMBER 3 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Joins sheet 1, Hoffman SE

79° 37′30″ 79° 33′45″

35° 00′00″ 35° 00′00″

34° 56′15″ 34° 56′15″

79° 37′30″ 79° 33′45″

Joins sheet 5, Marston NE

Joins sheet 9, Marston SW

Joins sheet 10, Marston SE

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES: 0.5 0 0.5

FEET: 500 0 500 1000 1500 2000 2500 3000 3500

KILOMETERS: 0.5 0 0.5

		1	1 HOFFMAN SE
		5	5 MARSTON NE
	9	10	9 MARSTON SW 10 MARSTON SE

INDEX TO ADJOINING 3.75 MAPS

MARSTON NW, NORTH CAROLINA

3.75 MINUTE SERIES
SHEET NUMBER 4 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

SCOTLAND COUNTY, NORTH CAROLINA
MARSTON NE QUADRANGLE
SHEET NUMBER 5 OF 33

Joins sheet 2, Pinebluff SW

Joins sheet 1, Hoffman SE

79° 33′ 45″ 79° 30′ 00″

35° 00′ 00″ 35° 00′ 00″

Joins sheet 4, Marston NW

Joins sheet 6, Silver Hill NW

34° 56′ 15″ 34° 56′ 15″

79° 33′ 45″ 79° 30′ 00″

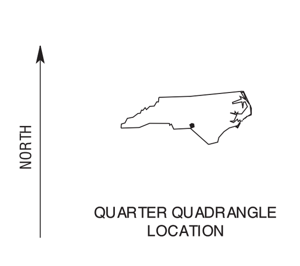
Joins sheet 9, Marston SW

Joins sheet 10, Marston SE

Joins sheet 11, Silver Hill SW

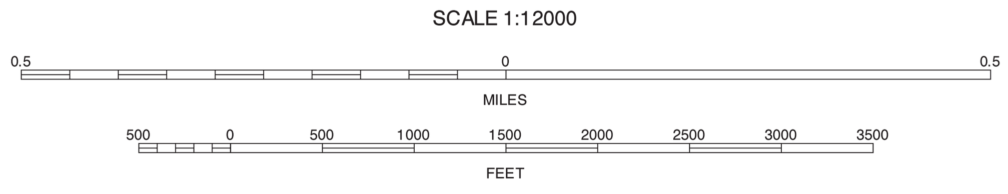
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE LOCATION

SCALE 1:12000



	1	2	1 HOFFMAN SE
4		6	2 PINEBLUFF SW
9	10	11	4 MARSTON NW
			6 SILVER HILL NW
			9 MARSTON SW
			10 MARSTON SE
			11 SILVER HILL SW

INDEX TO ADJOINING 3.75 MAPS

MARSTON NE, NORTH CAROLINA

3.75 MINUTE SERIES

SHEET NUMBER 5 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

SCOTLAND COUNTY, NORTH CAROLINA
SILVER HILL NW QUADRANGLE
SHEET NUMBER 6 OF 33

Joins sheet 1, Hoffman SE

Joins sheet 2, Pinebluff SW

Joins sheet 3, Pinebluff SE

79° 30′00″ 79° 26′15″

35° 00′00″

34° 56′15″

79° 30′00″ 79° 26′15″

Joins sheet 5, Marston NE

Joins sheet 7, Silver Hill NE

Joins sheet 10, Marston SE

Joins sheet 11, Silver Hill SW

Joins sheet 12, Silver Hill SE

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE
LOCATION

SCALE 1:12000

MILES: 0.5 0 0.5

FEET: 500 0 500 1000 1500 2000 2500 3000 3500

KILOMETERS: 0.5 0 0.5

1	2	3
5		7
10	11	12

1 HOFFMAN SE
2 PINEBLUFF SW
3 PINEBLUFF SE
5 MARSTON NE
7 SILVER HILL NE
10 MARSTON SE
11 SILVER HILL SW
12 SILVER HILL SE

INDEX TO ADJOINING 3.75 MAPS

SILVER HILL NW, NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 6 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

SCOTLAND COUNTY, NORTH CAROLINA
SILVER HILL NE QUADRANGLE
SHEET NUMBER 7 OF 33

Joins sheet 2, Pinebluff SW

Joins sheet 3, Pinebluff SE

79° 26′15″ 79° 22′30″

35° 00′00″ 35° 00′00″

Joins sheet 6, Silver Hill NW

Joins sheet 8, Wagram NW

34° 56′15″ 34° 56′15″

79° 26′15″ 79° 22′30″

Joins sheet 11, Silver Hill SW

Joins sheet 12, Silver Hill SE

Joins sheet 13, Wagram SW

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

2	3	
6		8
11	12	13

2 PINEBLUFF SW
3 PINEBLUFF SE
6 SILVER HILL NW
8 WAGRAM NW
11 SILVER HILL SW
12 SILVER HILL SE
13 WAGRAM SW

INDEX TO ADJOINING 3.75 MAPS

SILVER HILL NE, NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 7 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Joins sheet 3, Pinebluff SE

79° 22′30″ 79°18′45″

35° 00′00″ 35° 00′00″

Joins sheet 7, Silver Hill NE

34° 56′15″ 34° 56′15″

79° 22′30″ 79°18′45″

Joins sheet 13, Wagram SW

Joins sheet 12, Silver Hill SE

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

3		
7		
12	13	

3 PINEBLUFF SE
7 SILVER HILL NE
12 SILVER HILL SE
13 WAGRAM SW

INDEX TO ADJOINING 3.75 MAPS

WAGRAM NW, NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 8 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

SCOTLAND COUNTY, NORTH CAROLINA
MARSTON SW QUADRANGLE
SHEET NUMBER 9 OF 33

Joins sheet 4, Marston NW

Joins sheet 5, Marston NE

79° 37′ 30″ 79° 33′ 45″

34° 56′15″ 34° 56′15″

Joins sheet 10, Marston SE

34° 52′30″ 34° 52′30″

79° 37′ 30″ 79° 33′ 45″

Joins sheet 14, Ghio NE

Joins sheet 15, Gibson NW

Joins sheet 16, Gibson NE

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

	4	5
	■	10
14	15	16

4 MARSTON NW
5 MARSTON NE
10 MARSTON SE
14 GHIO NE
15 GIBSON NW
16 GIBSON NE

INDEX TO ADJOINING 3.75 MAPS

MARSTON SW, NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 9 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Joins sheet 4, Marston NW

Joins sheet 5, Marston NE

Joins sheet 6, Silver Hill NW

79° 33′ 45″ 79° 30′ 00″

34° 56′ 15″ 34° 56′ 15″

Joins sheet 9, Marston SW

Joins sheet 11, Silver Hill SW

34° 52′ 30″ 34° 52′ 30″

79° 33′ 45″ 79° 30′ 00″

Joins sheet 15, Gibson NW

Joins sheet 16, Gibson NE

Joins sheet 17, Laurinburg NW

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

4	5	6
9		11
15	16	17

4 MARSTON NW
5 MARSTON NE
6 SILVER HILL NW
9 MARSTON SW
11 SILVER HILL SW
15 GIBSON NW
16 GIBSON NE
17 LAURINBURG NW

INDEX TO ADJOINING 3.75 MAPS

MARSTON SE, NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 10 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Joins sheet 5, Marston NE

Joins sheet 6, Silver Hill NW

Joins sheet 7, Silver Hill NE

79° 30′00″

79° 26′15″

34° 56′15″

34° 56′15″

Joins sheet 10, Marston SE

Joins sheet 12, Silver Hill SE

34° 52′30″

34° 52′30″

79° 30′00″

79° 26′15″

Joins sheet 16, Gibson NE

Joins sheet 17, Laurinburg NW

Joins sheet 18, Laurinburg NE

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

5	6	7
10		12
16	17	18

5 MARSTON NE
6 SILVER HILL NW
7 SILVER HILL NE
10 MARSTON SE
12 SILVER HILL SE
16 GIBSON NE
17 LAURINBURG NW
18 LAURINBURG NE

INDEX TO ADJOINING 3.75 MAPS

SILVER HILL SW, NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 11 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

Joins sheet 6, Silver Hill NW

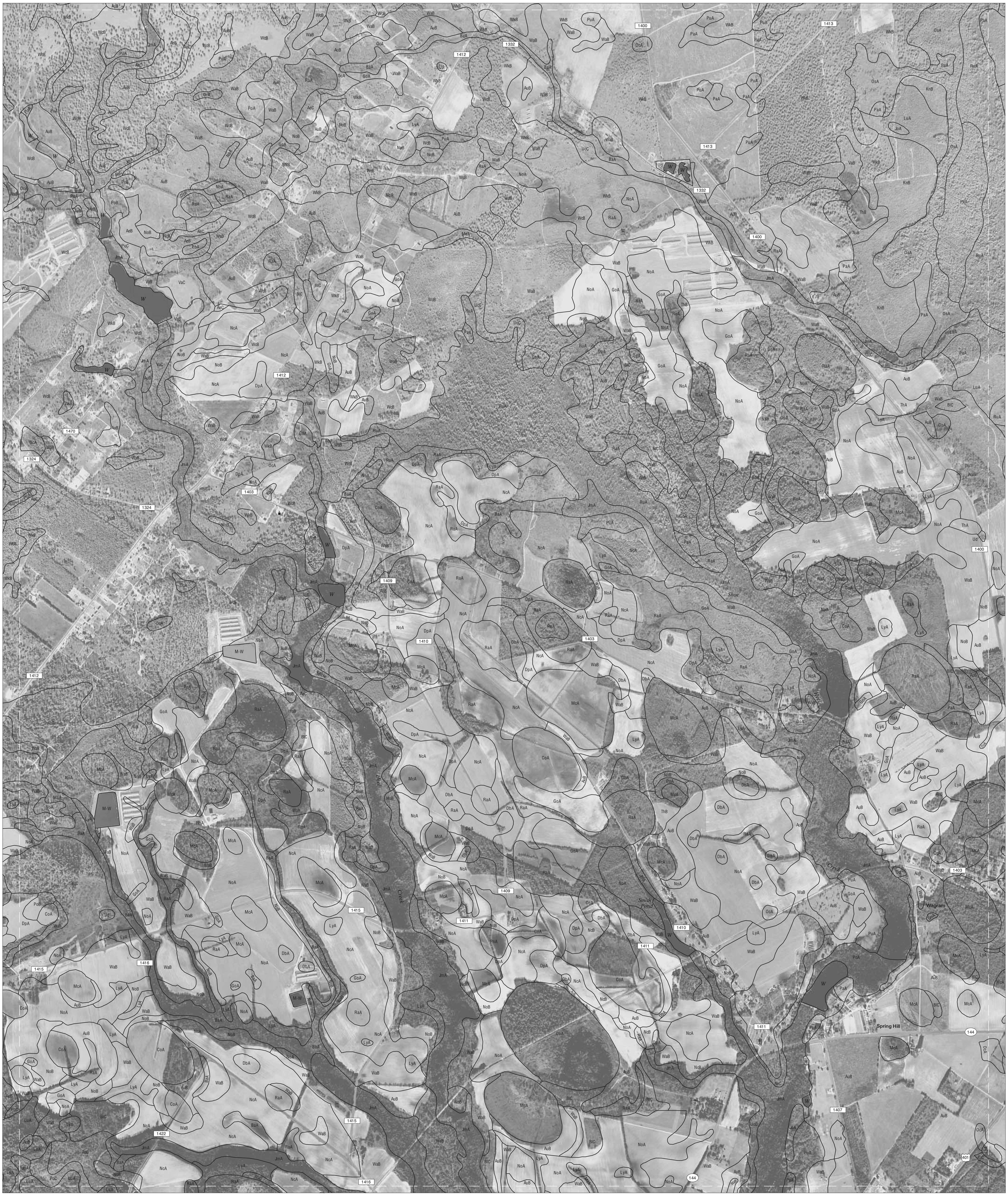
Joins sheet 7, Silver Hill NE

Joins sheet 8, Wagram NW

79° 26′15″ 79° 22′30″

34° 56′15″ 34° 56′15″

Joins sheet 11, Silver Hill SW



Joins sheet 13, Wagram SW

34° 52′30″ 34° 52′30″

79° 26′15″ 79° 22′30″

Joins sheet 17, Laurinburg NW

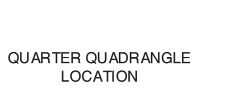
Joins sheet 18, Laurinburg NE

Joins sheet 19, Wakulla NW

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

6	7	8
11		13
17	18	19

6 SILVER HILL NW
7 SILVER HILL NE
8 WAGRAM NW
11 SILVER HILL SW
13 WAGRAM SW
17 LAURINBURG NW
18 LAURINBURG NE
19 WAKULLA NW

INDEX TO ADJOINING 3.75 MAPS

SILVER HILL SE, NORTH CAROLINA

3.75 MINUTE SERIES
SHEET NUMBER 12 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

SCOTLAND COUNTY, NORTH CAROLINA
WAGRAM SW QUADRANGLE
SHEET NUMBER 13 OF 33

Joins sheet 7, Silver Hill NE

Joins sheet 8, Wagram NW

79° 22′30″ | 79°18′45″

34°56′15″ | 34°56′15″

Joins sheet 12, Silver Hill SE

34°52′30″ | 34°52′30″

79° 22′30″ | 79°18′45″

Joins sheet 18, Laurinburg NE

Joins sheet 19, Wakulla NW

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

7	8	
12		
18	19	

7 SILVER HILL NE
8 WAGRAM NW
12 SILVER HILL SE
18 LAURINBURG NE
19 WAKULLA NW

INDEX TO ADJOINING 3.75 MAPS

WAGRAM SW, NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 13 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

Joins sheet 9, Marston SW

79° 41′15″ 79° 37′30″

34° 52′30″ 34° 52′30″

Joins sheet 15, Gibson NW

34° 48′45″ 34° 48′45″

79° 41′15″ 79° 37′30″

Joins sheet 20, Ghio SE

Joins sheet 21, Gibson SW

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

		9
		15
	20	21

9 MARSTON SW
15 GIBSON NW
20 GHIO SE
21 GIBSON SW

INDEX TO ADJOINING 3.75 MAPS

GHIO NE, NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 14 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

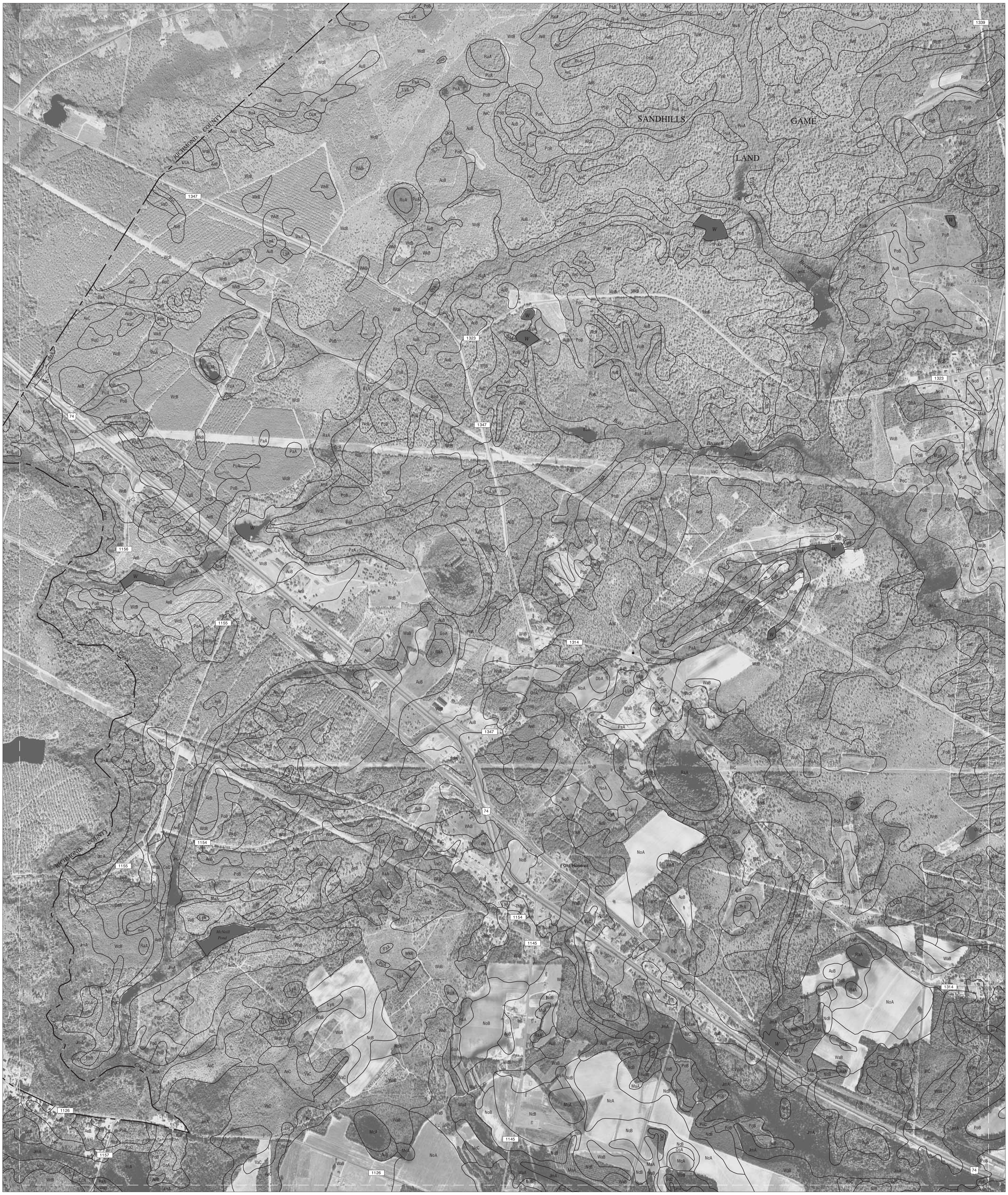
SCOTLAND COUNTY, NORTH CAROLINA
GIBSON NW QUADRANGLE
SHEET NUMBER 15 OF 33

Joins sheet 9, Marston SW

Joins sheet 10, Marston SE

79° 37′30″ 79° 33′45″

34° 52′30″



34° 48′45″

79° 37′30″ 79° 33′45″

Joins sheet 20, Ghio SE

Joins sheet 21, Gibson SW

Joins sheet 22, Gibson SE

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

	9	10
14		16
20	21	22

9 MARSTON SW
10 MARSTON SE
14 GHIO NE
16 GIBSON NE
20 GHIO SE
21 GIBSON SW
22 GIBSON SE

INDEX TO ADJOINING 3.75 MAPS

GIBSON NW, NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 15 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

SCOTLAND COUNTY, NORTH CAROLINA
GIBSON NE QUADRANGLE
SHEET NUMBER 16 OF 33

Joins sheet 9, Marston SW

Joins sheet 10, Marston SE

Joins sheet 11, Silver Hill SW

79° 33′45″ 79° 30′00″

34° 52′30″ 34° 52′30″

Joins sheet 15, Gibson NW

Joins sheet 17, Laurinburg NW

34° 48′45″ 34° 48′45″

79° 33′45″ 79° 30′00″

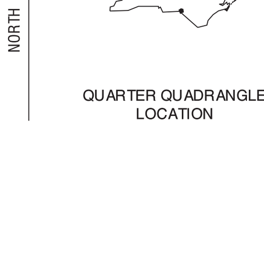
Joins sheet 21, Gibson SW

Joins sheet 22, Gibson SE

Joins sheet 23, Laurinburg SW

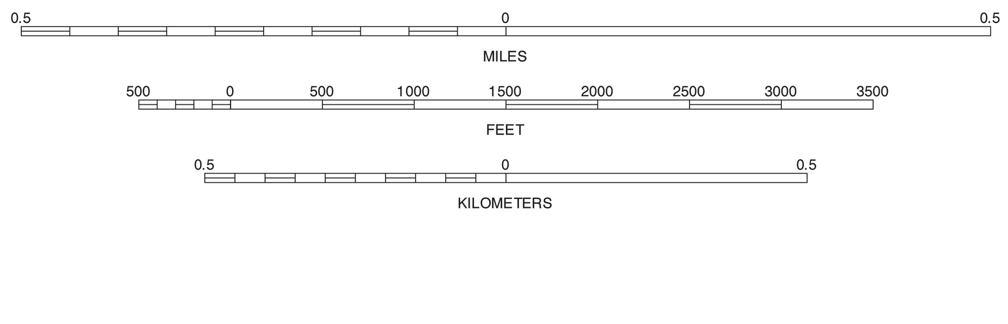
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE LOCATION

SCALE 1:12000



9	10	11
15		17
21	22	23

9 MARSTON SW
10 MARSTON SE
11 SILVER HILL SW
15 GIBSON NW
17 LAURINBURG NW
21 GIBSON SW
22 GIBSON SE
23 LAURINBURG SW

INDEX TO ADJOINING 3.75 MAPS

GIBSON NE, NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 16 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

SCOTLAND COUNTY, NORTH CAROLINA
LAURINBURG NW QUADRANGLE
SHEET NUMBER 17 OF 33

Joins sheet 10, Marston SE

Joins sheet 11, Silver Hill SW

Joins sheet 12, Silver Hill SE

79° 30′00″ | 79° 26′15″

34° 52′30″

Joins sheet 16, Gibson NE

Joins sheet 18, Laurinburg NE

34° 48′45″

79° 30′00″ | 79° 26′15″

Joins sheet 22, Gibson SE

Joins sheet 23, Laurinburg SW

Joins sheet 24, Laurinburg SE

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

10	11	12
16		18
22	23	24

10 MARSTON SE
11 SILVER HILL SW
12 SILVER HILL SE
16 GIBSON NE
18 LAURINBURG NE
22 GIBSON SE
23 LAURINBURG SW
24 LAURINBURG SE

INDEX TO ADJOINING 3.75 MAPS

LAURINBURG NW, NORTH CAROLINA

3.75 MINUTE SERIES
SHEET NUMBER 17 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

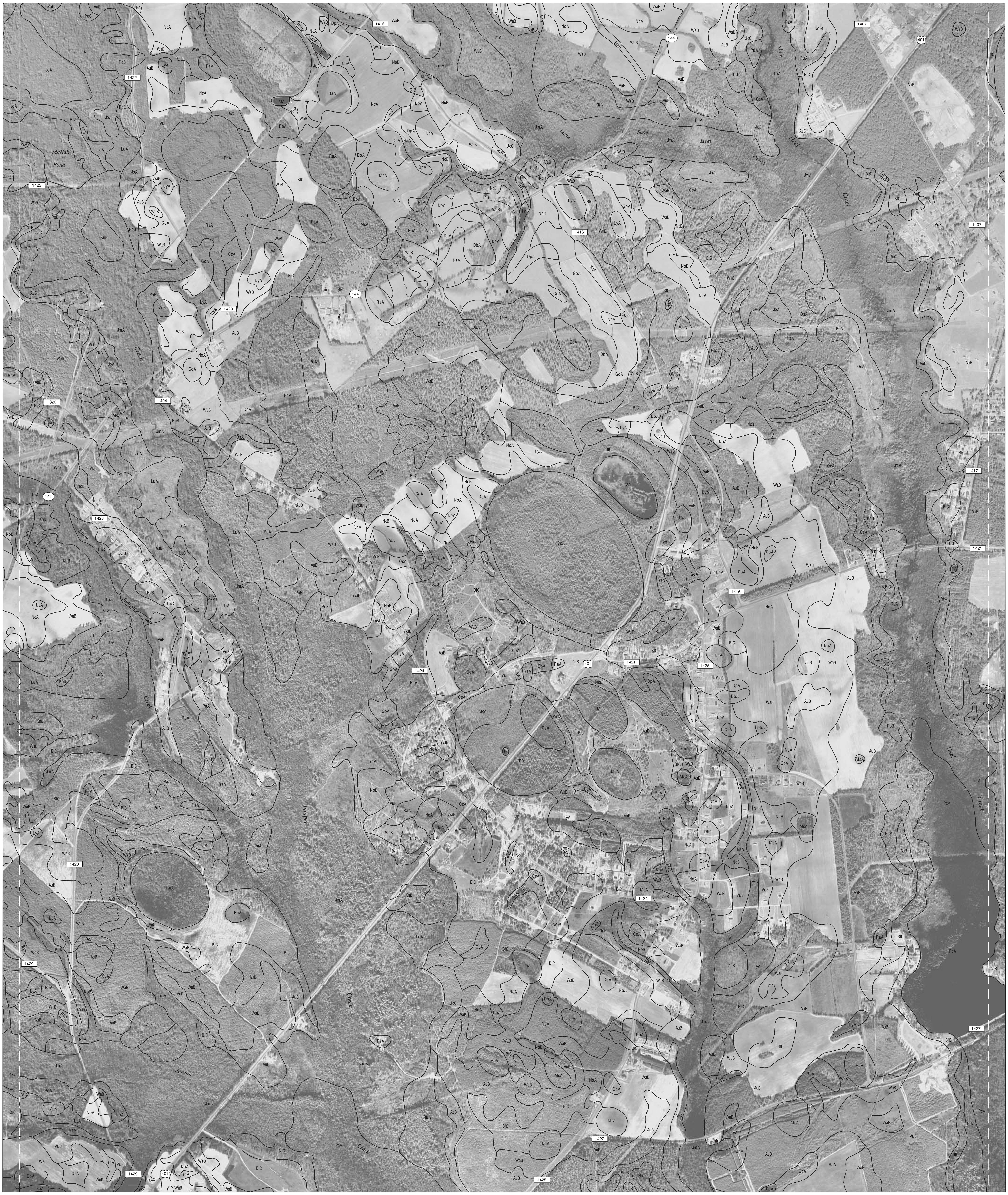
Joins sheet 11, Silver Hill SW

Joins sheet 12, Silver Hill SE

Joins sheet 13, Wagram SW

79° 26′15″ 79° 22′30″

34° 52′30″ 34° 52′30″



Joins sheet 17, Laurinburg NW

Joins sheet 19, Wakulla NW

34° 48′45″ 34° 48′45″

79° 26′15″ 79° 22′30″

Joins sheet 23, Laurinburg SW

Joins sheet 24, Laurinburg SE

Joins sheet 25, Wakulla SW

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

11	12	13
17		19
23	24	25

11 SILVER HILL SW
12 SILVER HILL SE
13 WAGRAM SW
17 LAURINBURG NW
19 WAKULLA NW
23 LAURINBURG SW
24 LAURINBURG SE
25 WAKULLA SW

INDEX TO ADJOINING 3.75 MAPS

LAURINBURG NE, NORTH CAROLINA

3.75 MINUTE SERIES
SHEET NUMBER 18 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Joins sheet 12, Silver Hill SE

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

Joins sheet 13, Wagram SW

SCOTLAND COUNTY, NORTH CAROLINA
WAKULLA NW QUADRANGLE
SHEET NUMBER 19 OF 33

79° 22′30″ | 79°18′45″

34° 52′30″ | 34° 52′30″

Joins sheet 18, Laurinburg NE

34° 48′45″ | 34° 48′45″

79° 22′30″ | 79°18′45″

Joins sheet 25, Wakulla SW

Joins sheet 24, Laurinburg SE

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

12	13	
18		
24	25	

12 SILVER HILL SE
13 WAGRAM SW
18 LAURINBURG NE
24 LAURINBURG SE
25 WAKULLA SW

INDEX TO ADJOINING 3.75 MAPS

WAKULLA NW, NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 19 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

SCOTLAND COUNTY, NORTH CAROLINA
GHIO SE QUADRANGLE (OVERSIZED)
SHEET NUMBER 20 OF 33

Joins sheet 14, Ghio NE

Joins sheet 15, Gibson NW

79° 41′15″ 79° 37′30″

34° 48′45″ 34° 48′45″

Joins sheet 21, Gibson SW

34° 45′00″ 34° 45′00″

79° 41′15″ 79° 37′30″

Joins sheet 26, McColl NW

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

14 15 21 26

14 GHIO NE
15 GIBSON NW
21 GIBSON SW
26 MCCOLL NW

INDEX TO ADJOINING 3.75 MAPS

GHIO SE (OVERSIZED), NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 20 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

SCOTLAND COUNTY, NORTH CAROLINA
GIBSON SW QUADRANGLE
SHEET NUMBER 21 OF 33

Joins sheet 14, Ghio NE

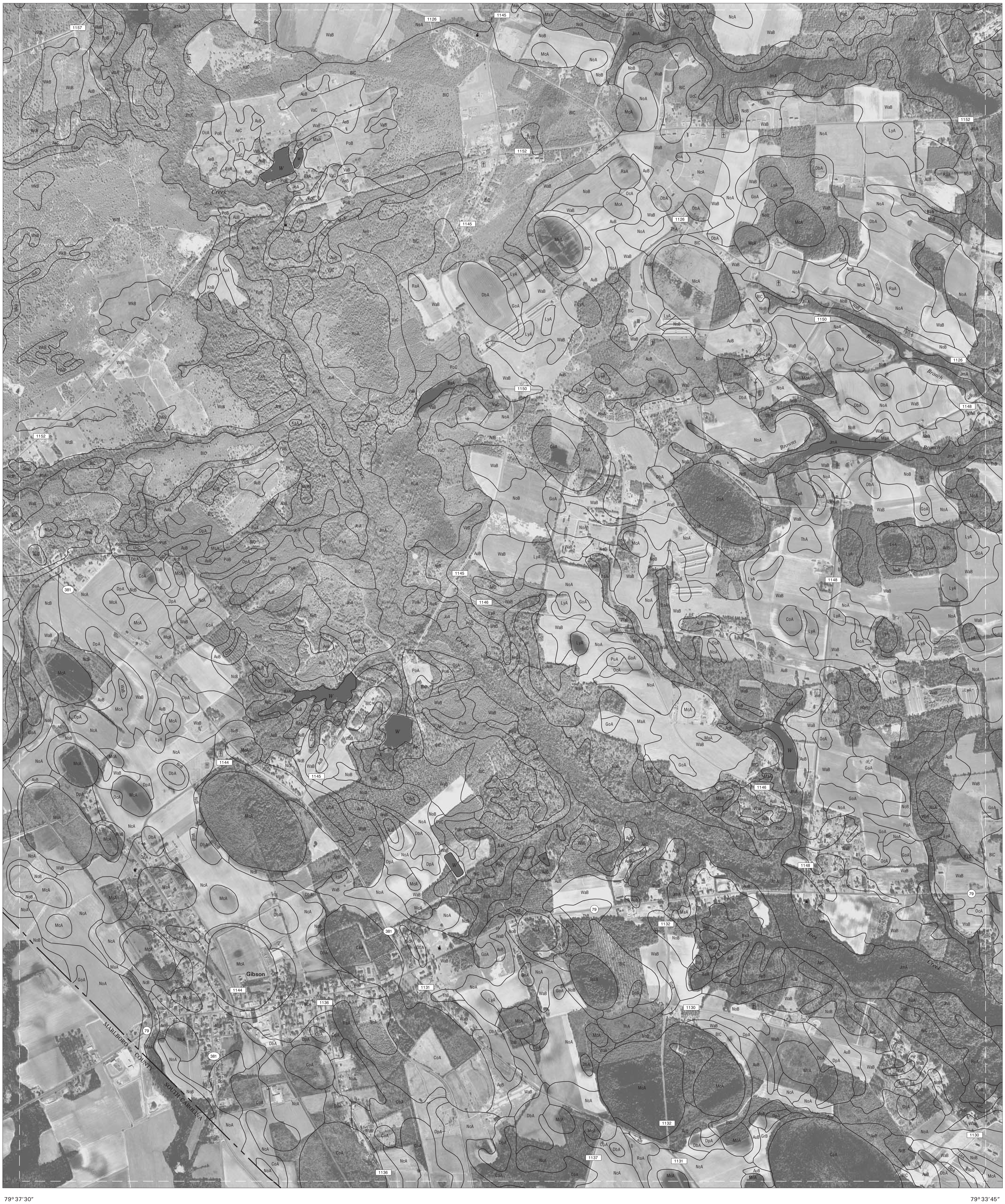
Joins sheet 15, Gibson NW

Joins sheet 16, Gibson NE

79° 37′30″

79° 33′45″

34° 48′45″



Joins sheet 20, Ghio SE

Joins sheet 22, Gibson SE

34° 45′00″

79° 37′30″

79° 33′45″

Joins sheet 26, McColl NW

Joins sheet 27, McColl NE

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

14	15	16
20		22
	26	27

14 GHIO NE
15 GIBSON NW
16 GIBSON NE
20 GHIO SE
22 GIBSON SE
26 MCCOLL NW
27 MCCOLL NE

INDEX TO ADJOINING 3.75 MAPS

GIBSON SW, NORTH CAROLINA

3.75 MINUTE SERIES
SHEET NUMBER 21 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

SCOTLAND COUNTY, NORTH CAROLINA
GIBSON SE QUADRANGLE
SHEET NUMBER 22 OF 33

Joins sheet 15, Gibson NW

Joins sheet 16, Gibson NE

Joins sheet 17, Laurinburg NW

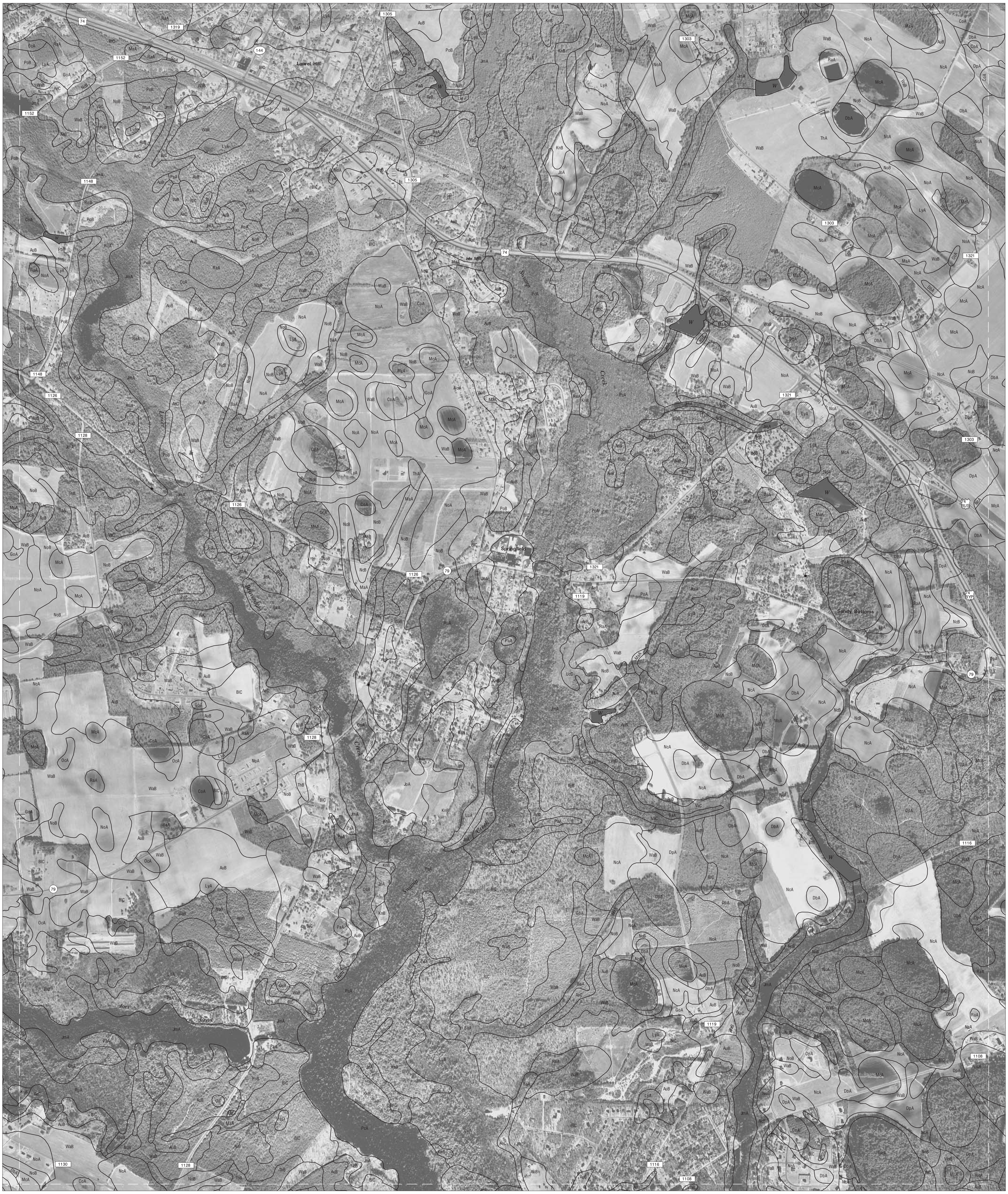
79° 33′45″

79° 30′00″

34° 48′45″

34° 48′45″

Joins sheet 21, Gibson SW



Joins sheet 23, Laurinburg SW

34° 45′00″

34° 45′00″

79° 33′45″

79° 30′00″

Joins sheet 26, McColl NW

Joins sheet 27, McColl NE

Joins sheet 28, Johns NW

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

15	16	17
21		23
26	27	28

15 GIBSON NW
16 GIBSON NE
17 LAURINBURG NW
21 GIBSON SW
23 LAURINBURG SW
26 MCCOLL NW
27 MCCOLL NE
28 JOHNS NW

INDEX TO ADJOINING 3.75 MAPS

GIBSON SE, NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 22 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

SCOTLAND COUNTY, NORTH CAROLINA
LAURINBURG SW QUADRANGLE
SHEET NUMBER 23 OF 33

Joins sheet 16, Gibson NE

Joins sheet 17, Laurinburg NW

Joins sheet 18, Laurinburg NE

79° 30′00″ 79° 26′15″

34° 48′45″ 34° 48′45″

Joins sheet 22, Gibson SE

Joins sheet 24, Laurinburg SE

34° 45′00″ 34° 45′00″

79° 30′00″ 79° 26′15″

Joins sheet 27, McColl NE

Joins sheet 28, Johns NW

Joins sheet 29, Johns NE

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

16	17	18
22		24
27	28	29

16 GIBSON NE
17 LAURINBURG NW
18 LAURINBURG NE
22 GIBSON SE
24 LAURINBURG SE
27 MCCOLL NE
28 JOHNS NW
29 JOHNS NE

INDEX TO ADJOINING 3.75 MAPS

LAURINBURG SW, NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 23 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Joins sheet 17, Laurinburg NW

Joins sheet 18, Laurinburg NE

Joins sheet 19, Wakulla NW

79° 26′15″ 79° 22′30″

34° 48′45″ 34° 48′45″

Joins sheet 23, Laurinburg SW

Joins sheet 25, Wakulla SW

34° 45′00″ 34° 45′00″

79° 26′15″ 79° 22′30″

Joins sheet 28, Johns NW

Joins sheet 29, Johns NE

Joins sheet 30, Maxton NW

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

17	18	19
23		25
28	29	30

17 LAURINBURG NW
18 LAURINBURG NE
19 WAKULLA NW
23 LAURINBURG SW
25 WAKULLA SW
28 JOHNS NW
29 JOHNS NE
30 MAXTON NW

INDEX TO ADJOINING 3.75 MAPS

LAURINBURG SE, NORTH CAROLINA

3.75 MINUTE SERIES
SHEET NUMBER 24 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Joins sheet 18, Laurinburg NE

Joins sheet 19, Wakulla NW

79° 22′30″ | 79°18′45″

34° 48′45″ | 34° 48′45″

Joins sheet 24, Laurinburg SE

34° 45′00″ | 34° 45′00″

79° 22′30″ | 79°18′45″

Joins sheet 30, Maxton NW

Joins sheet 29, Johns NE

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

18	19	
24		
29	30	

18 LAURINBURG NE
19 WAKULLA NW
24 LAURINBURG SE
29 JOHNS NE
30 MAXTON NW

INDEX TO ADJOINING 3.75 MAPS

WAKULLA SW, NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 25 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

SCOTLAND COUNTY, NORTH CAROLINA
MCCOLL NW QUADRANGLE
SHEET NUMBER 26 OF 33

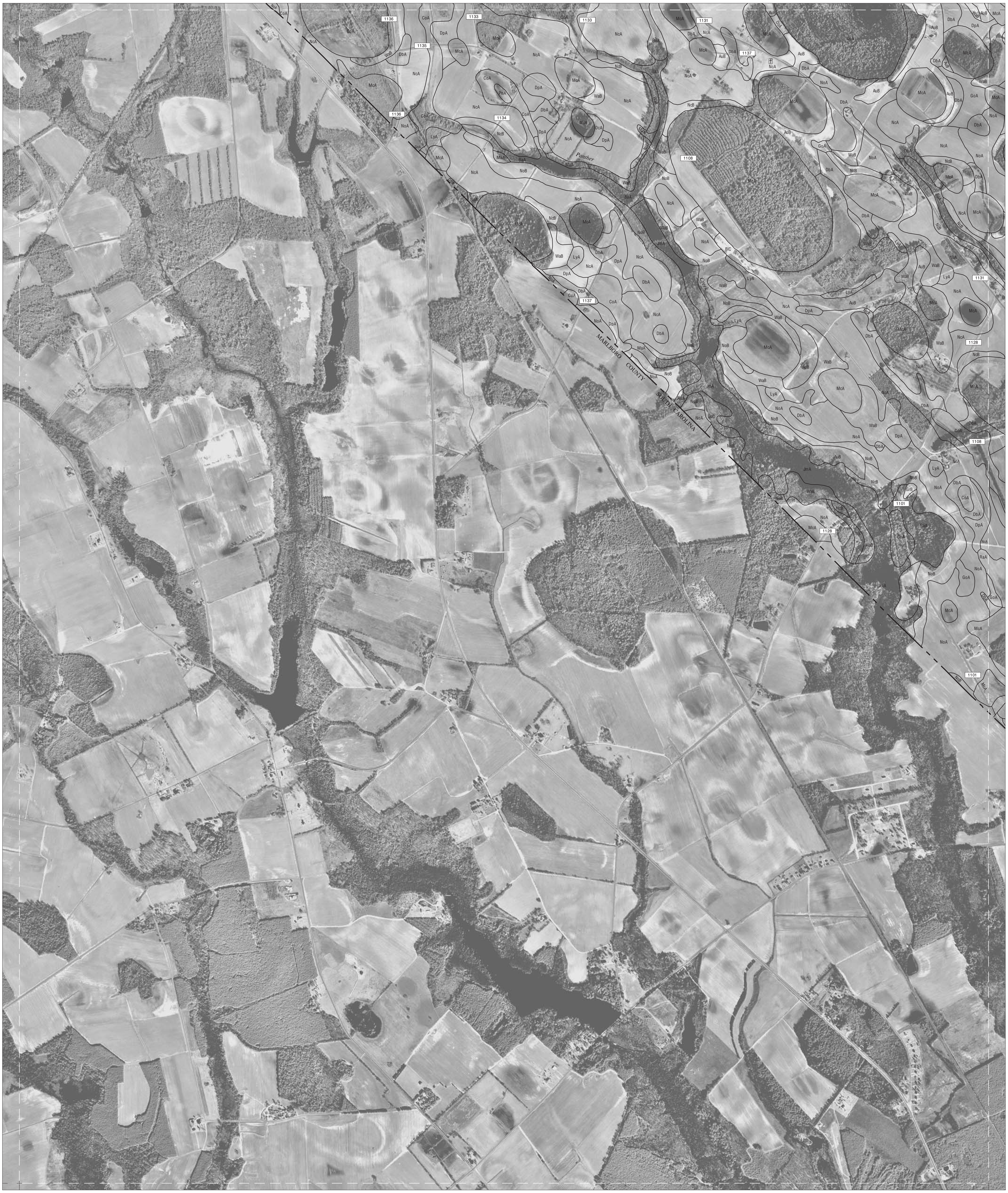
Joins sheet 20, Ghio SE

Joins sheet 21, Gibson SW

Joins sheet 22, Gibson SE

79° 37′ 30″ 79° 33′ 45″

34° 45′ 00″ 34° 45′ 00″



Joins sheet 27, McColl NE

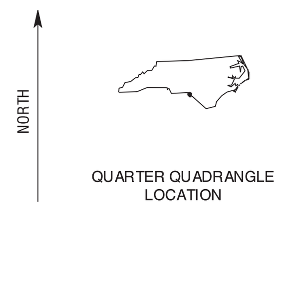
34° 41′ 15″ 34° 41′ 15″

79° 37′ 30″ 79° 33′ 45″

Joins sheet 31, McColl SE

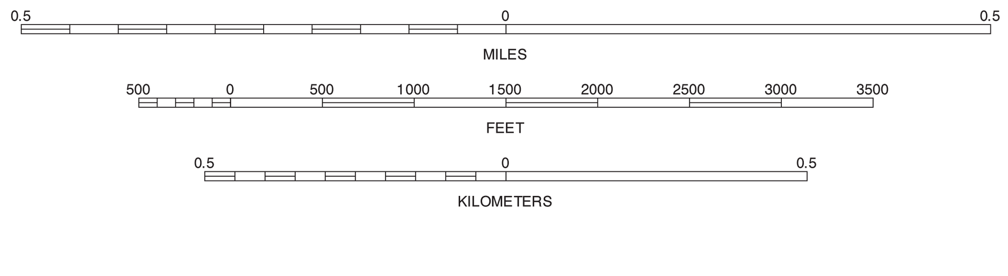
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE LOCATION

SCALE 1:12000



20	21	22	20 GHIO SE 21 GIBSON SW 22 GIBSON SE
		27	27 MCCOLL NE
		31	31 MCCOLL SE

INDEX TO ADJOINING 3.75 MAPS

MCCOLL NW, NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 26 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Joins sheet 21, Gibson SW

Joins sheet 22, Gibson SE

Joins sheet 23, Laurinburg SW

79° 33′45″

79° 30′00″

34° 45′00″

Joins sheet 26, McColl NW

Joins sheet 28, Johns NW

34° 41′15″

79° 33′45″

79° 30′00″

Joins sheet 31, McColl SE

Joins sheet 32, Johns SW

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

21	22	23
26		28
	31	32

21 GIBSON SW
22 GIBSON SE
23 LAURINBURG SW
26 MCCOLL NW
28 JOHNS NW
31 MCCOLL SE
32 JOHNS SW

INDEX TO ADJOINING 3.75 MAPS

MCCOLL NE, NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 27 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

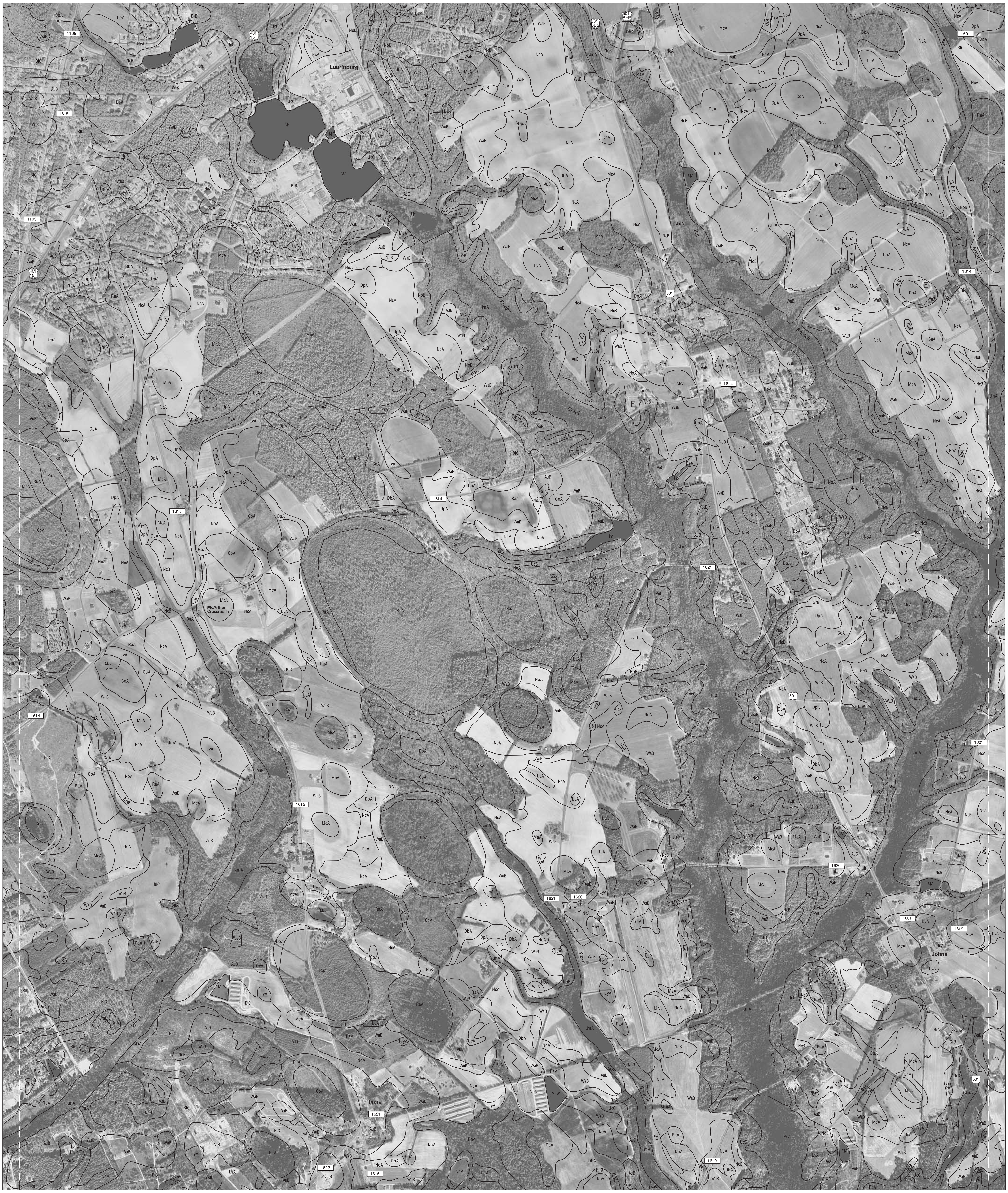
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

SCOTLAND COUNTY, NORTH CAROLINA
JOHNS NW QUADRANGLE
SHEET NUMBER 28 OF 33

Joins sheet 22, Gibson SE

Joins sheet 23, Laurinburg SW

Joins sheet 24, Laurinburg SE



Joins sheet 27, McColl NE

Joins sheet 29, Johns NE

Joins sheet 31, McColl SE

Joins sheet 32, Johns SW

Joins sheet 33, Johns SE

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

22	23	24
27		29
31	32	33

22 GIBSON SE
23 LAURINBURG SW
24 LAURINBURG SE
27 MCCOLL NE
29 JOHNS NE
31 MCCOLL SE
32 JOHNS SW
33 JOHNS SE

INDEX TO ADJOINING 3.75 MAPS

JOHNS NW, NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 28 OF 33

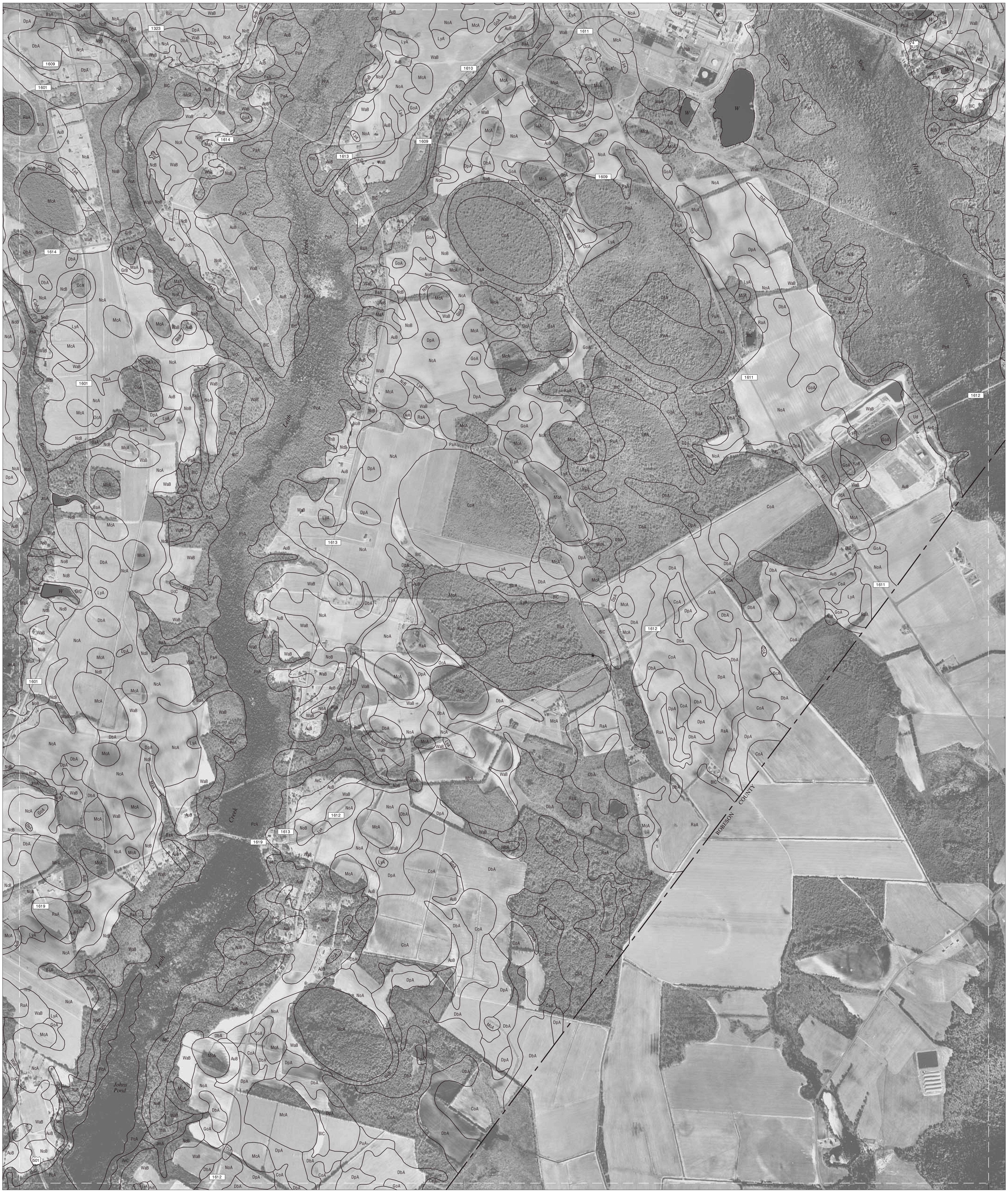
Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Joins sheet 23, Laurinburg SW
Joins sheet 24, Laurinburg SE
Joins sheet 25, Wakulla SW

79° 26′15″ 79° 22′30″

34° 45′00″ 34° 45′00″

Joins sheet 28, Johns NW
Joins sheet 30, Maxton NW



34° 41′15″ 34° 41′15″

79° 26′15″ 79° 22′30″

Joins sheet 32, Johns SW
Joins sheet 33, Johns SE

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 — 0 — 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 — 0 — 0.5 KILOMETERS

23	24	25
28		30
32	33	

23 LAURINBURG SW
24 LAURINBURG SE
25 WAKULLA SW
28 JOHNS NW
30 MAXTON NW
32 JOHNS SW
33 JOHNS SE

INDEX TO ADJOINING 3.75 MAPS

JOHNS NE, NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 29 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

SCOTLAND COUNTY, NORTH CAROLINA
MAXTON NW QUADRANGLE
SHEET NUMBER 30 OF 33

Joins sheet 24, Laurinburg SE

Joins sheet 25, Wakulla SW

79° 22′30″ — 79°18′45″

34° 45′00″

Joins sheet 29, Johns NE

34° 41′15″

79° 22′30″ — 79°18′45″

Joins sheet 33, Johns SE

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

24	25	
29		
33		

INDEX TO ADJOINING 3.75 MAPS

24 LAURINBURG SE
25 WAKULLA SW
29 JOHNS NE
33 JOHNS SE

MAXTON NW, NORTH CAROLINA

3.75 MINUTE SERIES
SHEET NUMBER 30 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Joins sheet 26, McColl NW

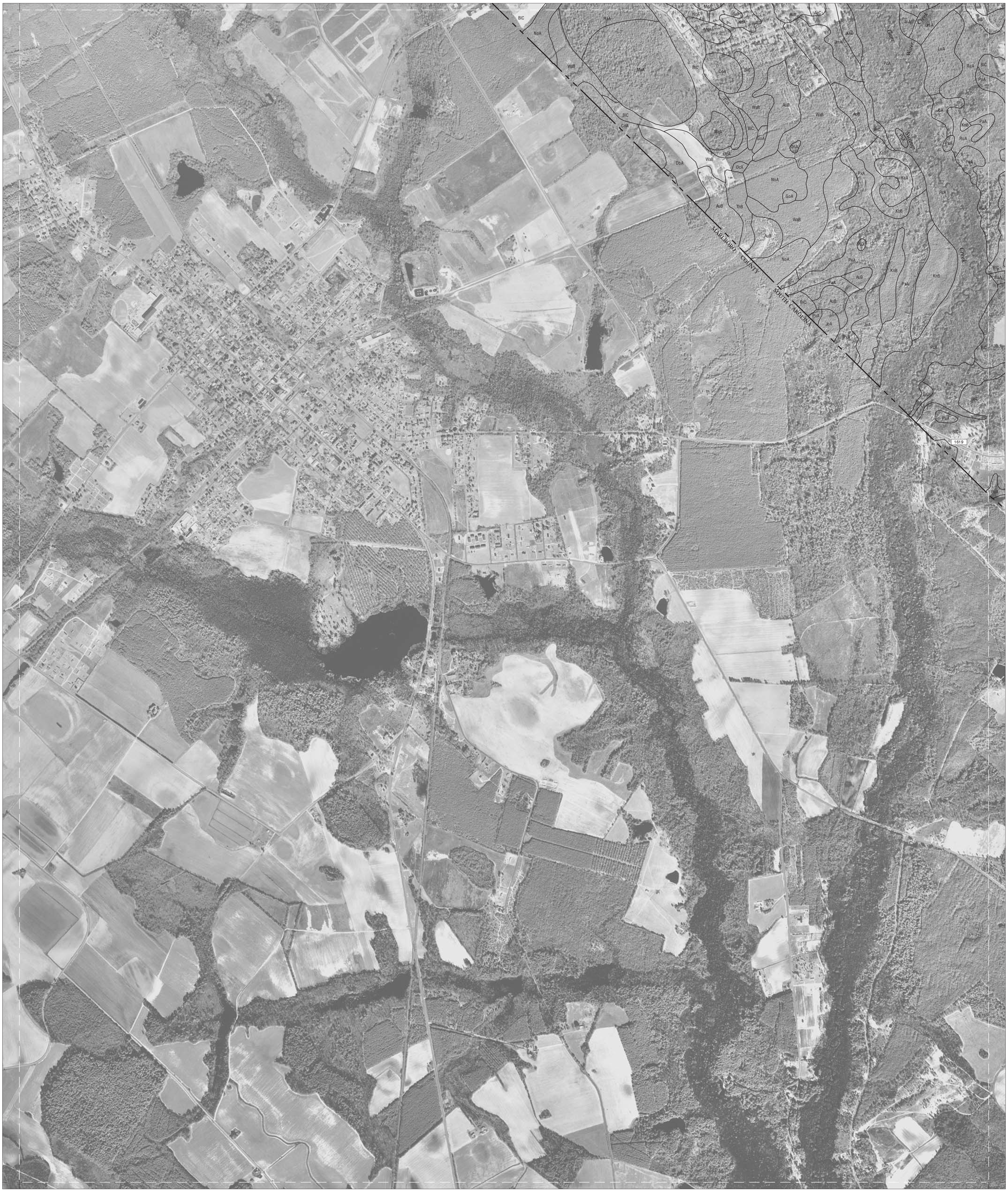
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

Joins sheet 27, McColl NE

SCOTLAND COUNTY, NORTH CAROLINA
MCCOLL SE QUADRANGLE
SHEET NUMBER 31 OF 33

Joins sheet 28, Johns NW

79° 33′45″ | 79° 30′00″
34° 41′15″ | 34° 41′15″



Joins sheet 32, Johns SW

34° 37′30″ | 34° 37′30″
79° 33′45″ | 79° 30′00″

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

26	27	28
	■	32

26 MCCOLL NW
27 MCCOLL NE
28 JOHNS NW
32 JOHNS SW

INDEX TO ADJOINING 3.75 MAPS

MCCOLL SE, NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 31 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

SCOTLAND COUNTY, NORTH CAROLINA
JOHNS SW QUADRANGLE
SHEET NUMBER 32 OF 33

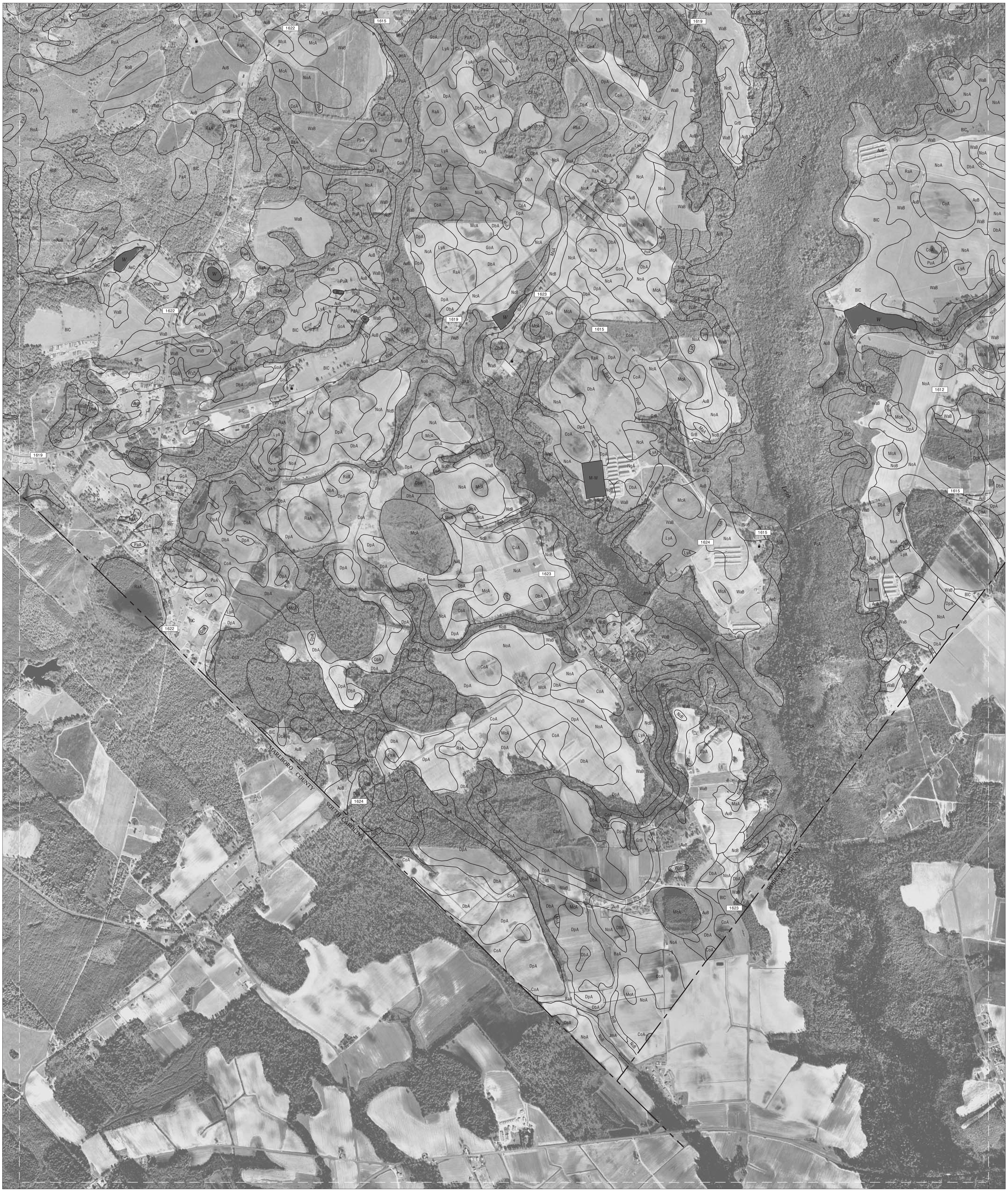
Joins sheet 27, McColl NE

Joins sheet 28, Johns NW

Joins sheet 29, Johns NE

79° 30'00"   79° 26'15"

34° 41'15"   34° 41'15"



Joins sheet 31, McColl SE

Joins sheet 33, Johns SE

34° 37'30"   34° 37'30"

79° 30'00"   79° 26'15"

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES: 0.5 0 0.5

FEET: 500 0 500 1000 1500 2000 2500 3000 3500

KILOMETERS: 0.5 0 0.5

27	28	29
31		33

27 MCCOLL NE
28 JOHNS NW
29 JOHNS NE
31 MCCOLL SE
33 JOHNS SE

INDEX TO ADJOINING 3.75 MAPS

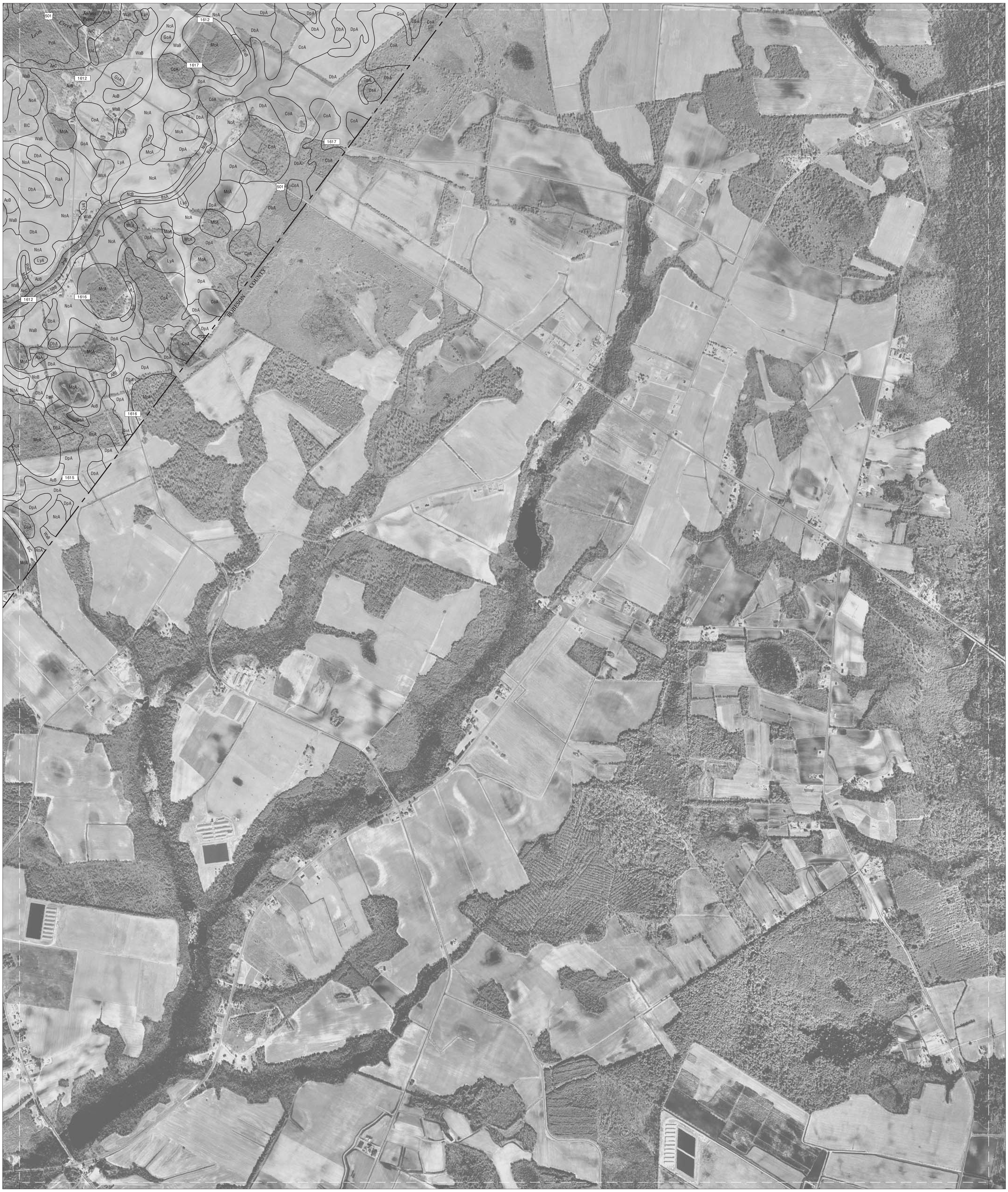
JOHNS SW, NORTH CAROLINA
3.75 MINUTE SERIES
SHEET NUMBER 32 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

79° 26′15″ | 79° 22′30″

34° 41′15″ | 34° 41′15″

Joins sheet 32, Johns SW



34° 37′30″ | 34° 37′30″

79° 26′15″ | 79° 22′30″

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1994-2000 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

28	29	30
32		

28 JOHNS NW
29 JOHNS NE
30 MAXTON NW
32 JOHNS SW

INDEX TO ADJOINING 3.75 MAPS

JOHNS SE, NORTH CAROLINA

3.75 MINUTE SERIES
SHEET NUMBER 33 OF 33

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.